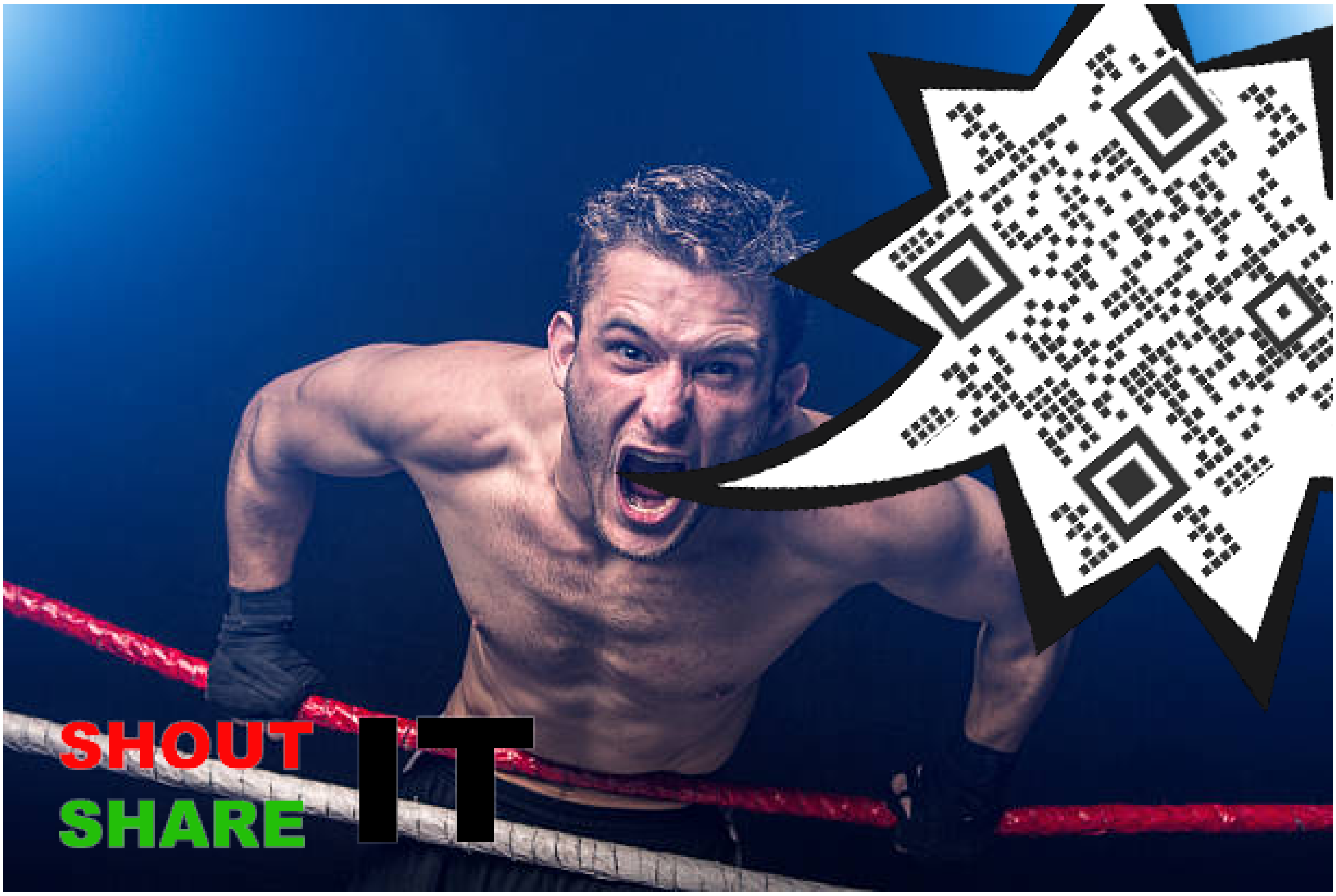
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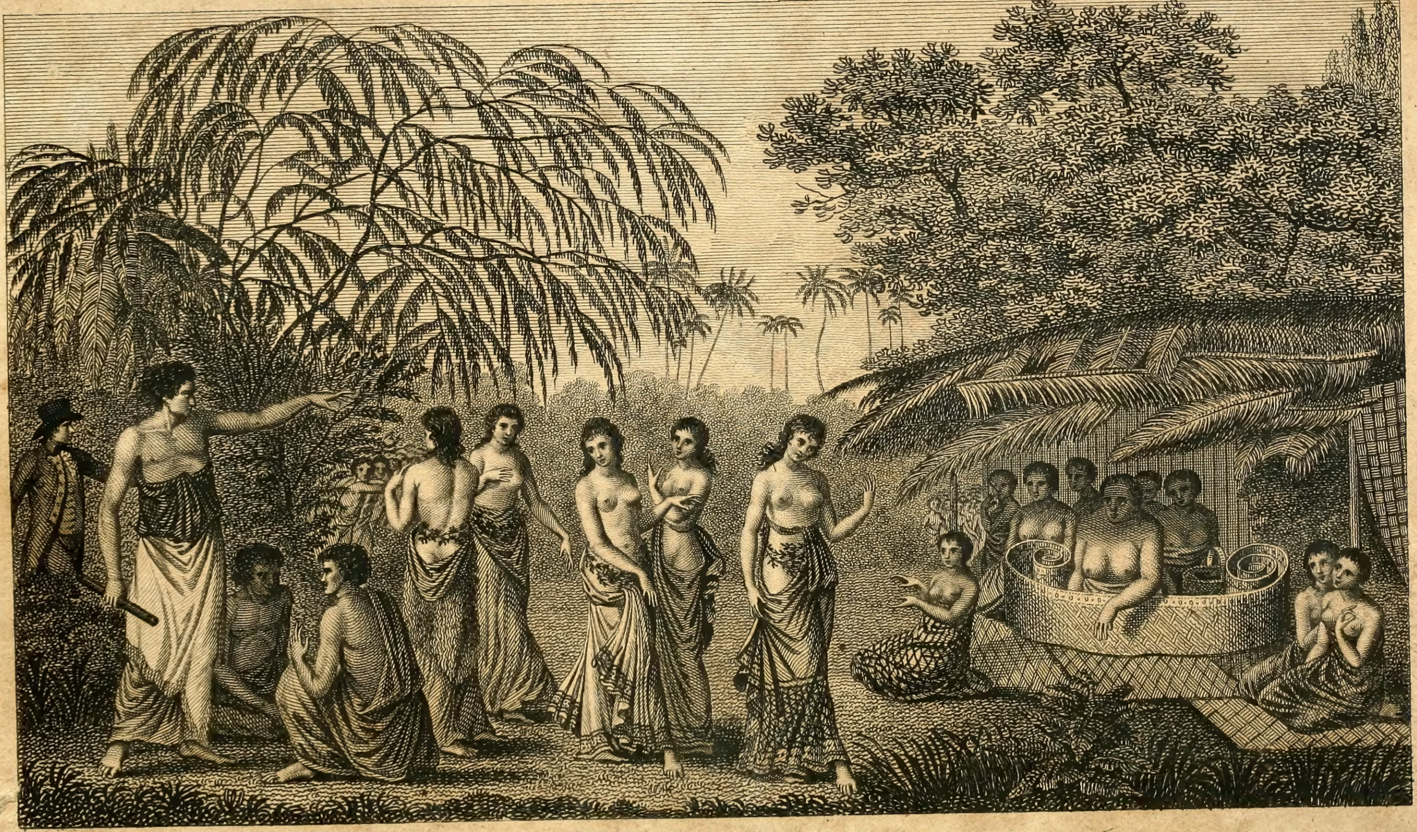

Dance of the Friendly Islands, in presence of the Queen, Tiné.

VOYAGE

IN SEARCH OF

LA PÉROUSE.

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p 6
Repair

PERFORMED BY ORDER OF

THE CONSTITUENT ASSEMBLY,

DURING THE

YEARS 1791, 1792, 1793, AND 1794,

AND DRAWN UP

BY M. LABILLARDIERE,

CORRESPONDENT OF THE ACADEMY OF SCIENCES AT
PARIS, MEMBER OF THE SOCIETY OF NATURAL
HISTORY, AND ONE OF THE NATURALISTS
ATTACHED TO THE EXPEDITION.

TRANSLATED FROM THE FRENCH.

ILLUSTRATED WITH FORTY-SIX PLATES.

IN TWO VOLUMES.

VOL. I.

London:
PRINTED FOR JOHN STOCKDALE, PICCADILLY.

1800.

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T. Gillet, Printer, Salisbury Square.

TO

ROBERT PEEL, ESQ.

Member of Parliament for the Borough of
Tamworth, &c. &c. &c.

Who, by his Ingenuity, Abilities, and Induſtry, has honourably
acquired a princely Fortune, and in ſo doing had the
Satisfaction of keeping ſeveral thouſand
Perſons in conſtant Employment:
Who, in the Time of Danger and National Difficulty, handſomely appropriated the munificent Sum of
TEN THOUSAND POUNDS,
TO THE EXIGENCIES OF HIS COUNTRY:
And whoſe Conduct,
In promoting AN UNION WITH IRELAND,
has ſhone ſo nobly diſintereſted:

THIS WORK,

AS A SMALL MARK OF RESPECT AND ESTEEM,
IS HUMBLY DEDICATED,

By his ever obliged, obedient,
And faithful Friend and Servant,
John Stockdale.

London 6th May, 1800.

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TRANSLATOR's PREFACE.

THE laudable taſte for Voyages and Travels, which prevails in the preſent age, has been gratified with many excellent productions, which render that ſpecies of literature highly intereſting to readers of almoſt every deſcription. Modern voyages of diſcovery have embraced ſo many objects, that in them the Navigator ſees the progreſs of his important art, the Geographer obſerves the improvement of his kindred ſcience, the Naturaliſt is gratified with curious and uſeful objects of reſearch, the Merchant diſcovers new ſcenes of commercial enterpriſe, and the General Reader finds a fund of rational entertainment.

The Moral Philoſopher, too, who loves to trace the advances of his ſpecies through its various gradations from ſavage to civilized life, draws from voyages and travels, the facts from which he is to deduce his concluſions reſpecting the ſocial, intellectual, and moral progreſs of Man. He ſees ſavage life every where diverſified with a variety, which, if he reaſon fairly, muſt lead him to conclude, that what is called the ſtate of nature, is, in truth, the ſtate of a rational being placed in various phyſical circumſtances, which have contracted or expanded his faculties in various degrees; but that "men always appear "among animals a diſtinct and a ſuperior race; "that neither the poſſeſſion of ſimilar organs, "nor the uſe of the hand," which nature has "given to ſome ſpecies of apes, nor the continued "intercourſe with this ſovereign artiſt, have enabled any other ſpecies to blend their nature "with his; that in his rudeſt ſtate he is found "to be above them, and in his greateſt degeneracy never deſcends to their level; that he is, "in ſhort, *a man* in every condition; and that "we can learn nothing of his nature from the "analogy of other animals."* Every where adapting means to ends, and variouſly altering and combining thoſe means, according to his views and wants, Man, even when purſuing the gratification of animal inſtincts, too often miſerably depraved, ſhows himſelf to be poſſeſſed of nobler faculties, of liberty to chuſe among different objects and expedients, and of reaſon to direct him in that choice. There is ſufficient variety in human actions to ſhow that, though Man acts from motives, he acts not mechanically, but freely; yet ſufficient ſimilarity of conduct, in ſimilar circumſtances, to prove the unity of his nature. Hence there appears no ground whatever for ſuppoſing, that any one tribe of mankind is naturally of an order ſuperior to the reſt, or has any ſhadow of right to infringe, far leſs to abrogate, the common claims of humanity. Philoſophers ſhould not forget, and the moſt reſpectable modern philoſophers have not forgotten, that the ſavage ſtate of the moſt civilized nations now in Europe, is a ſubject within the pale of authentic hiſtory, and that the privation of iron alone, would ſoon reduce them nearly to the barbarous ſtate, from which, by a train of favourable events, their foreſathers emerged ſome centuries ago. If the limits of a preface would allow us to purſue the reflections ſuggeſted by the different views of ſavage life, preſented by this and various other ſcientific voyages, it would be eaſy to ſhow, that the boaſted refinement of Europe entirely depends on a few happy diſcoveries, which are become ſo familiar to us, that we are apt to ſuppoſe the inhabitants of theſe parts of the world to have been always poſſeſſed of them; diſcoveries ſo unaccountable, and ſo remote from any experiments which uncivilized tribes can be ſuppoſed to have made, that we cannot do better than acknowledge them among the many precious gifts of an indulgent Providence.

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* Ferguſon on Civil Society.

Having mentioned Providence, a word not very common in ſome of our modern voyages, we are tempted to add a conſideration which has often occurred to our minds, in contemplating the probable iſſue of that zeal for diſcovering and correſponding with diſtant regions, which has long animated the maritime powers of Europe. Without obtruding our own ſentiments on the reader, we may be permitted to aſk, Whether appearances do not juſtify a conjecture, that the Great Arbiter of the deſtinies of nations may render that zeal ſubſervient to the moral and intellectual, not to ſay the religious, improvement, and the conſequent happineſs, of our whole ſpecies? or, Whether, as has hitherto generally happened, the advantages of civilization may not, in the progreſs of events, be transferred from the Europeans, who have but too little prized them, to thoſe remote countries which they have been ſo diligently exploring? If ſo, the period may arrive, when New Zealand may produce her Lockes, her Newtons, and her Monteſquieus;

and when great nations in the immenſe region of New Holland, may ſend their navigators, philoſophers, and antiquaries, to contemplate the ruins of *ancient* London and Paris, and to trace the languid remains of the arts and ſciences in this quarter of the globe. Who can tell, whether the rudiments of ſome great future empire may not already exiſt at Botany Bay?

But, not to detain the reader with ſuch general reflections, which, however, open intereſting views to contemplative minds, we proceed to ſay a few words of the work now preſented to the Public. And here we need to do little more than refer to the learned and ingenious Author's introduction to his own work. The reader will immediately perceive that, if it has been tolerably executed, it muſt form a valuable Supplement to the Voyage* of the unfortunate La Pérouſe—ſo valuable indeed, that it may fairly be queſtioned, whether that work can be conſidered as perfect without it.

Of the execution of the work, the reader muſt form his own judgment. He will perhaps agree with us, that the Author writes with the modeſty and perſpicuity which become a philoſopher, who all along recollects that he is compoſing a narrative, and not a declamation. He has, in our opinion, with great taſte and judgment, generally abſtained from thoſe rhetorical flouriſhes, which give an air of bombaſt to too many of the works of his countrymen, even when treating of ſubjects which demand accuracy rather than ornament. Moſt of his reflections are pertinent and juſt, and not ſo far purſued as to deprive the reader of an opportunity of exerciſing his ingenuity by extending them farther.

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* Printed for Stockdale, London, in two large vols. 8vo. with fifty-one fine Plates. It muſt be obſerved, that this is the only edition to which are annexed the intereſting Travels of De Leſſeps, over the Continent, from Kamtſchatka, with Pérouſe's diſpatches.

This chaſte and unaffected manner of writing may be conſidered as an internal mark of the fidelity of his narrative. He had no weak or deformed parts to conceal with flowery verbiage, and therefore he rejected its meretricious aid. As another, and a ſtill ſtronger proof of our Author's fidelity, we may mention his occaſional cenſure of the conduct of Officers, not excepting the Commander in Chief himſelf, when their conduct happened not to appear quite deſerving of that general approbation, which he ſeems willing to beſtow. A man muſt be very conſcious of having honeſtly executed his own miſſion, and of faithfully deſcribing the objects of it, when he ſcruples not to expreſs publicly his diſapprobation of the conduct of Officers of talents and diſtinction, engaged in the higher departments of the ſame great undertaking.

In tranſlating the work, the object aimed at was to render it ſo literally as never to depart from the meaning of the Author; yet ſo freely as not merely to clothe his French idiom with Engliſh words. The tranſlation of ſuch a work ſhould, in our opinion, be free without licence, and literal without ſervility.

Some readers would, no doubt, have willingly diſpenſed with a great number of the nautical remarks, and with all the bearings and diſtances; but thoſe particulars were plainly ſo important to navigators, that they could not, on any account, be omitted. Nor, indeed, has a ſingle ſentence of the original, been retrenched in the tranſlation, except two paſſages, which would have been juſtly conſidered as indelicate by moſt Engliſh readers; and, for the ſame reaſon, the two engravings referred to in the exceptionable paſſages, have been altered.

The whole of the plates are given in a ſtyle generally not inferior to the original, which, with the French work in quarto, are ſold for ſix guineas, being thrice the price of the preſent tranſlation.

*** In the original, the diſtances are all expreſſed in the new French denominations of *metres*, *decametres*, &c. and the Author has given a table for reducing them to toiſes. But, in the tranſlation, the reader has been ſpared that trouble, by every where inſerting the equivalent toiſes, or French fathoms. A toiſe is equal to ſix French feet, or nearly to ſix feet five inches, Engliſh meaſure: 2,853 toiſes make a geographical or nautical league, twenty of which make a degree of a great circle of the earth. Hence, to reduce toiſes to nautical leagues, divide them by 2,853; the quotient will be the leagues, and the remainder the odd toiſes.

INTRODUCTION.

NO intelligence had been received for three years reſpecting the ſhips Bouſſole and Aſtrolabe, commanded by M. de la Pérouſe, when, early in the year 1791, the Pariſian Society of Natural Hiſtory called the attention of the Conſtituent Aſſembly to the fate of that navigator, and his unfortunate companions.

The hope of recovering at leaſt ſome wreck of an expedition undertaken to promote the ſciences, induced the Aſſembly to ſend two other ſhips to ſteer the ſame courſe which thoſe navigators muſt have purſued, after their departure from Botany Bay. Some of them, it was thought, might have eſcaped from the wreck, and might be confined in a deſert iſland, or thrown upon ſome coaſt inhabited by ſavages. Perhaps they might be dragging out life in a diſtant clime, with their longing eyes continually fixed upon the ſea, anxiouſly looking for that relief which they had a right to expect from their country.

On the 9th of February 1791, the following decree was paſſed upon this ſubject:

" The National Aſſembly having heard the

" report of its joint Committees of Agriculture, " Commerce, and the Marine, decrees,

" That the King be petitioned to iſſue orders " to all the ambaſſadors, reſidents, conſuls, and " agents of the nation, to apply, in the name of " humanity, and of the arts and ſciences, to the " different Sovereigns at whoſe courts they re- " ſide, requeſting them to charge all their navi- " gators and agents whatſoever, and in what " places ſoever, but particularly in the moſt ſouth- " erly parts of the South Sea, to ſearch diligently " for the two French frigates, the Bouſſole and " the Aſtrolabe, commanded by M. de la Pé- " rouſe, as alſo for their ſhips' companies, and to " make every inquiry which has a tendency to " aſcertain their exiſtence or their ſhipwreck ; in " order that, if M. de la Pérouſe and his compa- " nions ſhould be found or met with, in any place " whatſoever, they may give them every aſſiſt- " ance, and procure them all the means neceſſary " for their return into their own country, and for " bringing with them all the property of which " they may be poſſeſſed ; and the National Aſ- " ſembly engages to indemnify, and even to re- " compenſe, in proportion to the importance of " the ſervice, any perſon or perſons who ſhall " give aſſiſtance to thoſe navigators, ſhall procure " intelligence concerning them, or ſhall be inſtru-

" mental in reſtoring to France any papers or ef-
" fects whatſoever, which may belong, or may
" have belonged, to their expedition :

" Decrees, farther, that the King be petitioned
" to give orders for the fitting out of one or more
" ſhips, having on board men of ſcience, na-
" turaliſts, and draughtſmen, and to charge the
" commanders of the expedition with the two-
" fold miſſion of ſearching for M. de la Pérouſe,
" agreeable to the documents, inſtructions, and
" orders which ſhall be delivered to them, and of
" making inquiries relative to the ſciences and to
" commerce, taking every meaſure to render this
" expedition uſeful and advantageous to naviga-
" tion, geography, commerce, and the arts and
" ſciences, independently of their ſearch for M.
" de la Pérouſe, and even after having found him,
" or obtained intelligence concerning him."

Compared with the original, by us the Preſident and Secretaries of the National Aſſembly, at Paris, this 24th day of Feb. 1791.

(Signed) Duport, Preſident.
Liore,
Boussion, Secretaries.

From my earlieſt years, I had devoted myſelf to the ſcience of natural hiſtory ; and, being perſuaded,

ſuaded, that it is in the great book of Nature, that we ought to ſtudy her productions, and form a juſt idea of her phœnomena, when I had finiſhed my medical courſe, I took a journey into England, which was immediately followed by another into the Alps, where the different temperatures of a mountainous region preſent us with a prodigious variety of objects.

I next viſited a part of Aſia Minor, where I reſided two years, in order that I might examine thoſe plants, of which the Greek and Arabian phyſicians have left us very imperfect deſcriptions; and I had the ſatisfaction of bringing from that country very important collections.

Soon after my return from this laſt tour, the National Aſſembly decreed the equipment of two ſhips, in order to attempt to recover at leaſt a part of the wreck of the ſhips commanded by La Pérouſe.

It was an honourable diſtinction to be of the number of thoſe, whoſe duty it was to make every poſſible ſearch, which could contribute to reſtore to their country, men who had rendered her ſuch ſervices.

That voyage was, in other reſpects, very tempting to a naturaliſt. Countries newly diſcovered might be expected to increaſe our knowledge with new productions, which might contribute to the advancement of the arts and ſciences.

My paſſion for voyages had hitherto increaſed, and three months ſpent in navigating the Mediterranean, when I went to Aſia Minor, had given me ſome experience of a long voyage. Hence I ſeized with avidity this opportunity of traverſing the South Seas.

If the gratification of this paſſion for ſtudy coſts us trouble, the varied products of a newly diſcovered region amply compenſate us for all the ſufferings unavoidable in long voyages.

I was appointed by the Government to make, in the capacity of naturaliſt, the voyage of which I am about to give an account.

My Journal, which was kept with care during the whole courſe of the voyage, contained many nautical obſervations; but I ought to obſerve, that that part of my work would have been very incomplete, without the auxiliary labour beſtowed upon it by Citizen Legrand, one of the beſt officers of our expedition.

I take this opportunity of teſtifying my grateful remembrance of that ſkilful mariner, whoſe loſs in the preſent war is a ſubject of regret.

When I was leaving Batavia, in order to proceed to the Iſle of France, Citizen Piron, draughtſman to the expedition, begged my acceptance of duplicates of his drawings of the dreſſes of the natives, which he had made in the courſe of the voyage. I do not heſitate to aſſure my readers, that thoſe works of his pencil are ſtriking likeneſſes.

I have endeavoured to report, in the moſt exact manner, the facts which I witneſſed during this painful voyage, acroſs ſeas abounding with rocks, and among ſavages, againſt whom it was neceſſary to exert continual vigilance.

General Dentrecaſteaux received the command of the expedition. That officer requeſted from the Government two ſhips of about five hundred tons burden. Their bottoms were ſheathed with wood, and then filled with ſcupper nails. It was not apprehended that this mode would diminiſh their velocity, and it was thought that it would add to the ſolidity of their conſtruction. It is, however, acknowledged that ſhips ſheathed and bottomed with copper may be conſtructed with equal ſolidity, and that they have greatly the advantage in point of ſailing. Thoſe ſhips received names analogous to the object of the enterprize. That in which General Dentrecaſteaux embarked, was called the Recherche (Reſearch), and the other, commanded by Captain Huon Kermadec, received the name of the Eſperance (the Hope).

The Recherche had on board one hundred and thirteen men at the time of her departure: the Eſperance only one hundred and ſix.

ON BOARD OF THE RECHERCHE.*

Principal Officers.

Bruny Dentrecaſteaux, Commander of the Expedition,
Doribeau, Lieutenant,
Roſſel, ditto,
Cretin, ditto,
Saint Aignan, ditto,
Singler Dewelle ditto,
Willaumez ſenior, Enſign,
Longuerue, *Eleve*,
Achard Bonvouloir, ditto,
Dumerite, Volunteer,
Renard, Surgeon,
Hiacinthe Boideliot, Surgeon's Mate.
Letrand, Aſtronomer,
Labillardiere, Naturaliſt,
Deſchamps, ditto,
Louis Ventenat, ditto, acting as Chaplain,
Beautems Beaupré, Geographical Engineer,
Piron, Draughtſman,
Lahaie, Gardener.

Warrant and Petty Officers - -	8
Gunners and Soldiers - - -	18
Carpenters - - - - -	3
Caulkers - - - - -	2

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* The name of every individual on board both the ſhips is inſerted in the original; but it ſeems unneceſſary to retain any names in this tranſlation but thoſe of the officers and men of ſcience, who, if we may uſe the expreſſion, are the chief *dramatis perſonæ*, and ſeveral of them come forward, in their reſpective capacities, in the courſe of the work.—*Tranſlator*.

Sail-makers	2
Pilots	3
Armourer	1
Blackſmith	1
Sailors	36
Young Sailors	3
Boys	4
Cook, Baker, &c.	5
Domeſtics.	8

ON BOARD THE ESPERANCE.

Principal Officers.

Huon Kermadec, Captain,
Trobiant, Lieutenant,
Laſſeny, ditto,
Lagrandiere, ditto,
Luſançay, ditto,
Lamotte Dupertail, ditto,
Legrand, Enſign,
Laignel, ditto,
Jurieu, Volunteer,
Boyne, *Eleve*,
Jouanet, Surgeon,
Gauffre, Surgeon's Mate.
Pierſon, Aſtronomer, acting as Chaplain,
Riche, Naturaliſt,
Blavier, ditto,
Jouveney, Geographical Engineer,
Ely, Draughtſman.

Warrant and Petty Officers	8
Armourers	2
Gunners and Marines	14
Carpenters	2
Blackſmith	1
Caulkers	2
Sail-makers	2
Pilots	4

Sailors

Sailors	36
Boys	5
Cook, Baker, &c.	5
Domeſtics	8

It is melancholy to add, that of two hundred and nineteen people, ninety-nine had died before my arrival in the Iſle of France. But it muſt be obſerved, that we loſt but few people in the courſe of our voyage, and that the dreadful mortality which we experienced was owing to our long ſtay in the iſland of Java.

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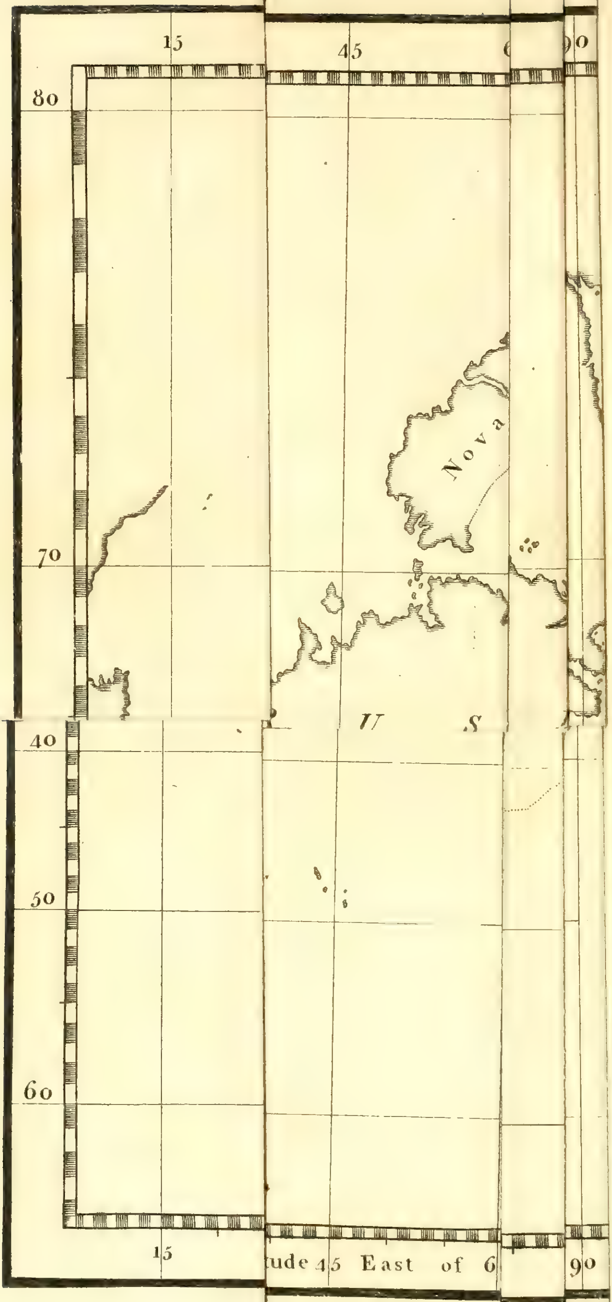
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VOYAGE

IN SEARCH OF

LA PÉROUSE.

CHAP. I.

Departure from Breſt—Arrival at St. Croix, in the Iſland of Teneriffe—Journey to the Peak of Teneriffe—Reſuſcitation of a Sailor who had been drowned——Some daring Robbers carry off his Clothes—Two of our Naturaliſts are attacked with a Spitting of Blood, which obliges them to give up their Deſign of Proceeding to the Summit of the Peak—Engliſh Veſſels in the Road of St. Croix—Different Reſults from the Obſervations made in Order to determine the Variations of the Needle—New Eruption of a Volcano to the South-eaſt of the Peak.

AUGUST, 1791.

THE equipment of the two veſſels appointed for the voyage which we were about to undertake being already in a ſtate of great forwardneſs, towards the cloſe of the month of Auguſt, we received orders from General Dentrecaſteaux to repair to Breſt. I had the pleaſure of travelling thither in the company of three perſons engaged in the ſame expedition, namely, the Citizens Riche, Beaupré, and Pierſon.

We arrived at Breſt on the 10th of September. Some of the fineſt ſhips in the French navy, ſuch as the Majeſtueux, the Etats de Bourgogne, the America, &c. were then in the harbour.

While our aſtronomers were engaged in making the obſervations neceſſary for determining the movements of our time-keepers, thoſe who deſigned to make Natural Hiſtory the principal object of their attention were employed in furniſhing themſelves with all the requiſites for preparing the collections, which they purpoſed to make in the unknown countries we were about to viſit.

As it was my intention to devote myſelf chiefly to the obſervation of the vegetable kingdom, I ſtood in need of a great quantity of paper, and wiſhed to provide myſelf with ſome of a very large ſize. It was, however, not without great difficulty that I was able to procure twenty-two reams; almoſt all that remained in the warehouſes having been lately appropriated to the ſervice of the artillery.

I employed a part of the time that I had at my own diſpoſal in examining the botanical garden, which is kept in very good order. There is alſo, in this place, a ſmall cabinet of natural hiſtory, which contains ſeveral anatomical preparations preſented to it by Citizen Joannet, ſurgeon of the Eſperance.

The muſter of our crews took place in the harbour on the 21ſt of September.

The veſſels went into the road-ſtead on the 25th. There were then no foreign ſhips there, and very few French.

We were very heavily laden, ſo that when we ſet ſail our draught was thirteen feet nine inches at the ſtern, and twelve feet ten inches at the head.

There were on board the Recherche: 6 eight pounders; 2 carronades of thirty-ſix; 6 pedereroes of half a pound; 12 pedereroes of ſix ounces; 45 muſkets; 35 piſtols; 50 ſabres: 30 battle-axes, and 10 eſpingoles.

The Eſperance was provided with nearly the ſame means of defence, which were ſufficient to ſecure us againſt any violence that might be attempted by ſavages.

Both veſſels were furniſhed with a great ſtore of commodities intended to be diſtributed amongſt the natives of the South-ſeas. Iron tools, and ſtuffs of different colours, eſpecially red, formed the baſis of our bartering ſtock.

Each of the veſſels was ſtored with proviſions ſufficient for the conſumption of eighteen months.

We now only waited for a favourable wind to ſet ſail. A pretty freſh breeze ſpringing up from the eaſt, enabled us to get under way about one o'clock in the afternoon of the 28th of September. Soon after we had left the roads, we diſcovered two ſailors and a cabin-boy, who being very deſirous of going on this expedition, and having been diſappointed in their wiſh to be included in our crew, had concealed themſelves in the ſhip. As we had ſcarcely room ſufficient for the men already on board, our Commander gave orders to tack about and make for the roads of Bertheaume, where our three unbidden gueſts were ſet on ſhore.

The Eſperance, having met with no ſuch interruption, had got conſiderably a-head of us, but we came up with her before night, as our veſſel was a much better ſailer.

At taking our departure at ſix in the evening, we found our place to be 48° 13′ N. lat. 7° 15′ E. long.

We ſet the oueſſant at N. 2° W. of the compaſs.

The bec de la chevre at S. E. 4° E.

The bec du raz at S. 2° E.

Point Mathieu was then at the diſtance of 2,565 toiſes.

We now ſteered our courſe E. N. E. till towards midnight, when we directed it right eaſt.

On the 29th, our Commander Dentrecaſteaux was informed, by diſpatches which he had orders not to open before we were in the main ſea, that Major Huon Kermandec, Commander of the Eſperance, was advanced to the rank of poſt-captain *(capitaine de vaiſſeau)*, and himſelf to that of rear-admiral *(contre-amiral)*. This intelligence was immediately conveyed by the ſpeaking-trumpet to the Eſperance, and our flags were hoiſted with the diſtinctive enſigns of the rank conferred upon the Commander.

We again diſcovered two marines, and a cabin-boy, who were not inrolled among our crew, and had kept themſelves till now concealed in the ſhip. As we were already too far from the land to ſet them on ſhore, the Commander permitted them to accompany us on our expedition.

Having made ſeveral ſea-voyages before the preſent, I had flattered myſelf that I was too ſeaſoned a ſailor to be any more incommoded by the motion of the veſſel; but I found that I had already entirely loſt this qualification, for I was ſea-ſick during the firſt three days after our ſailing from Breſt. I have had frequent opportunities in the courſe of this voyage of remarking, that a very ſhort ſtay upon ſhore is ſufficient to render me anew ſuſceptible of ſickneſs from the motion of the veſſel; for whenever we have put out to ſea, after having lain a ſhort time at anchor, I have always been diſordered for two or three days as much as I was after our departure from Breſt. The ſailors adviſe one, in theſe caſes, to endeavour to eat, notwithſtanding the loathing of food that always accompanies this diſorder. But this piece of advice it is very difficult to follow; for beſides the pain produced by the action of ſwallowing, the preſence of food in the ſtomach increaſes the nauſea, and the vomiting that ſupervenes is ſtill more diſtreſſing.

Diluting liquors, taken in ſmall quantities at a time, ſo as not to burden the ſtomach, have always afforded me the moſt relief. Lukewarm water, ſlightly ſweetened with ſugar, is the drink which I have generally uſed, as it is the eaſieſt to be procured at ſea.

We had, however, ſeveral perſons on board, who, though they had never been at ſea before, experienced not the ſmalleſt inconvenience from the toſſing of the ſhip. Such a conſtitution is very deſirable for thoſe who undertake long voyages; for it is impoſſible to deſcribe the diſagreeable ſenſations that attend this ſpaſmodic affection, which, as it operates upon every part of the frame, produces ſuch a general depreſſion of its powers, that life would be inſupportable, were it not for the hope of a ſpeedy termination of the diſorder.

From the day of our ſetting ſail, to the 5th of October, we had ſlight breezes, that varied between the north and eaſt points of the compaſs. From that time to our arrival at Teneriffe, they blew pretty freſh, varying between the north and north-eaſt. This alteration in the ſtate of the wind gave us no ſmall uneaſineſs, as in our ſituation it might become productive of the moſt fatal conſequences. Lumbered as we were in every part of the veſſel, and drawing conſiderably above the load-water line, we ran the riſk of being overſet by a ſudden ſquall: beſides, the ſtowage had been very negligently performed. In this diſorderly ſtate we had ſailed from France, although the expedition had been decreed by the National Aſſembly almoſt eight months before it took place.

On the 11th of October, about fifty-five minutes after ten o'clock, we obſerved an eclipſe of the moon. The obſervations that can be taken at ſea, lead to no very accurate reſults. Citizen Willaumez, however, concluded, from one which he took, that we were now in the longitude of 18° 19′ 45″ W. On the 12th, about eight in the morning, the Eſperance intimated to us by a ſignal, that land was eſpied.

Towards noon we reckoned ourſelves to be at the diſtance of about 71,800 toiſes from the peak of Teneriffe, which bore S. E. S. raiſing its head majeſtically above the clouds.

At the cloſe of the evening we were not more than about 10,260 toiſes diſtant from the north-eaſt point of the iſland. We ſhifted with the fore and main top-ſails every three hours, whilſt we expected the dawn. As ſoon as it appeared, we made towards the iſland, coaſting along at the diſtance of 500 toiſes.

About half an hour after nine in the morning, we caſt anchor in the road of St. Croix, in a muddy bottom of black ſand, about fifteen toiſes in depth.

The French Conſul, Citizen Fontpertuis, waited immediately upon our Commander, with an offer of his ſervices in furniſhing us with whatever we might want for the proſecution of our expedition.

I went on ſhore in the afternoon, to take a view of the environs of the town. Although the ſeaſon was conſiderably advanced, the reflection of the rays of the ſun from the volcanic ſtones, produced a degree of heat that was the more oppreſſive as the air was perfectly calm.

I obſerved among the plants that grow in the neighbourhood of St. Croix, a woody ſpecies of balm, known by botaniſts under the name of *meliſſa fruticoſa*, alſo the *ſaccharum teneriffæ*, the *cacalia kleinia*, the *datura metel*, the *chryſanthemum fruteſcens*, &c. Some of the gardens were ornamented with the beautiful tree termed *poinciana pulcherrima*.

In the evening, Citizen Ely, being ſtruck with the groteſque appearance of ſome of the women in the town, who, even during the greateſt heat of the ſeaſon, wear long cloaks of very coarſe woollen ſtuffs, was employed in drawing a ſketch of one of them, when he was ſuddenly interrupted by a ſentinel, who imagined him to be taking a plan of the harbour. It was in vain that he attempted to explain to him what his draught was intended to repreſent: the ſoldier would not ſuffer him to finiſh it.

As we had anchored too cloſe to another ſmall veſſel, we caſt an anchor in the afternoon nearer to the ſhore, by which we kept ourſelves at a convenient diſtance.

The bearings we took at this place gave us the following reſults:

The redoubt on the north ſide of the town, N. N. E. 4° E.

The great tower ſituated about the middle of the town, E. S. E.

At ſun-riſe each of the forts returned our ſalute of nine guns with an equal number. On the noon of the preceding day, we had ſaluted the town with fifteen, as it returned us gun for gun.

A packet-boat from Spain caſt anchor to-day in the road-ſtead.

We had agreed to take a journey to the peak on the morrow, and ſubſequently to viſit the other high mountains of the iſland in ſucceſſion. The French Conſul very obligingly did all that was in his power, to facilitate the execution of our deſign, and gave us letters of recommendation to M. de Cologant, a very reſpectable merchant, reſident at Orotava.

About four o'clock the next morning, our party aſſembled upon the Mole to the number of eight; namely, Develle, one of the officers of our ſhip, Piron, Deſchamps, Lahaye, and myſelf, with three ſervants, one of whom underſtood the Spaniſh language, and ſerved as our interpreter. We found the mules that were to carry us at the ſea-ſide; but it was more than an hour before we could ſet out upon our journey, it being no eaſy matter to aſſemble our guides, ſome of whom, knowing that we could not ſet off without them, made no ſcruple of letting us wait till they choſe to make their appearance. When they had arrived we thought we ſhould be able immediately to proceed, but we were obliged to expoſtulate with them a long time, before they could be induced to carry the ſmall ſtock of neceſſaries that we took with us upon our expedition.

The reader will recollect that our ſhips were ſo plentifully ſtored with proviſions, that one might have thought we were going to ſail to ſome deſert country. Roſſel, who had the charge of the officers' table, had given orders to the cook to ſend us an excellent ſalmon-pie for our journey. I ſhould not have mentioned ſo trivial a circumſtance, had it not been for the ſake of the contraſt which it affords with the worm-eaten biſcuits and cheeſe, that were our uſual regale whilſt we remained on ſhore, in the ſubſequent part of our expedition.

Monſ. de Cologant having been informed by the French Conſul of our intended journey, invited us to come to his houſe at the harbour of Orotava. This port, which is not more than about 15,390 toiſes diſtant from St. Croix, is a very convenient baiting-place for thoſe who viſit the peak; it being ſituated at the foot of the neareſt mountains of the chain to which it belongs.

We were three hours before we arrived at Laguna. This town is only 5,130 toiſes diſtant from St. Croix; but the road thither is very fatiguing, as it aſcends for the greater part of the way. The place is meanly built, and very thinly inhabited. We were informed that at leaſt one half of its inhabitants conſiſts of monks.

On our way to Laguna we paſſed over ſome barren mountains, which were covered with a variety of plants of a luxurious growth. Amongſt others we noticed the *euphorbia canarienſis*, the *euphorbia dendroides*, the *cacalia kleinia*, the *cachis opuntia*, &c. Theſe plants, as they derive their nouriſhment almoſt entirely from the atmoſphere, thrive very well in ſpite of the ſterility of the abrupt precipices on which they grow. When we deſcended into the ſmall plain on which the town ſtands, we remarked that the mould produced from the corruption of the vegetables, and waſhed down from the ſurrounding mountains by the rain, anſwers a very uſeful purpoſe in fertilizing this little ſpot of ground, ſo that it yields abundance of corn, Indian wheat, millet, and other eſculent plants.

I here obſerved a ſpecies of the *periploca*, which I had formerly diſcovered during my travels in the Levant. I have given an account of it in the ſecond decade of my deſcription of the plants of Syria, under the appellation of *periploca anguſtifolia.* Citizen Desfontaines has likewiſe collected ſome of the ſame ſpecies upon the coaſts of Barbary.

All the ſtones that we had hitherto ſeen in theſe regions appeared to have undergone the action of fire. As the mountains of this chain that are of the mean elevation conſiſt of large maſſes, that after being fuſed muſt have retained a great degree of heat for a conſiderable length of time; I expected to find the lavas very compact in their texture. My conjecture was confirmed. Their grain is very fine, and their colour for the moſt part a deep brown.

Surrounded with theſe volcanic remains, we found the heat very oppreſſive, which appeared to incommode our guides much more than ourſelves; ſo that they exerted all their powers of perſuaſion in order to prevail upon us to make halt during the day, and only travel in the night-time They probably imagined that our ſole aim was to ſee the ſummit of the peak, and ſeveral of our company would have had no very great objections againſt our journey being conducted upon that plan. But it is eaſy to ſuppoſe that ſuch a nocturnal ramble could not promiſe much advantage to thoſe whoſe object of purſuit was the ſtudy of natural hiſtory.

The inhabitants of the iſland are beſet with religious prejudices from their earlieſt infancy. The children came running out of their habitations to enquire if we were of their religion; and we contented ourſelves with commiſerating the unfortunate beings, upon whom monkiſh bigotry and intolerance exert with unbounded rigour their pernicious ſway.

Moſt of the garden-walls in the country beyond Laguna, are ornamented with the beautiful plant called *trichomanes canarienſe.*

As we approached Orotava, our road led us down a very gentle declivity. We ſaw no more ſuch barren mountains as in the vicinity of St. Croix, where the luxuriance of the vegetable kingdom is only an indication of the ſterility of the ſoil; but verdant banks covered with vineyards, the produce of which conſtitutes the chief wealth of the iſland. The ſhrub termed *boſca yervamora* grows here in low ſituations.

At five o'clock in the evening we arrived at Orotava, where we were received by M. de Cologant, in the moſt hoſpitable manner.

Two veſſels, an Engliſh and a Dutch, were then at anchor in the road-ſtead, in order to take in a cargo of wine. The landing-place here is much more difficult of acceſs than that at St.

Croix, on which account this harbour is leſs frequented.

M. de Cologant's wine-vaults were an object well worthy of our attention; as the wines of the iſland are the principal commodity in which this opulent merchant trades.

Amongſt the different kinds of wine which they contain, there are two ſorts that have qualities very diſtinct from each other; namely, the ſack, or dry wine, and that which is commonly known by the name of malmſey. In the preparation of the latter, care is taken to concentrate its ſaccharine principle as much as poſſible.

The price of the beſt wine was then 120 piaſtres per pipe, and that of the inferior ſort 60 piaſtres. It is neceſſary however to remark, that I here ſpeak only of the price at which it is ſold to ſtrangers; for the ſame wine which they buy at 60 piaſtres the pipe, is ſold to the inhabitants of the iſland for ſix and thirty.

When the fermentation of theſe wines has proceeded to a certain length, it is the cuſtom to mix with them a conſiderable quantity of brandy, which renders them ſo heady, that many perſons are unable to drink them, even in very moderate quantity, without feeling diſagreeable effects upon the nervous ſyſtem from this admixture.

We were aſſured that the iſland generally yields thirty thouſand pipes of wine in a year. As it does not produce a ſufficient quantity of corn for the conſumption of the inhabitants, a part of the produce of the wines, which are ſold to ſtrangers as Madeira wine (and indeed they differ very little from it in quality), is expended in the purchaſe of this indiſpenſably neceſſary article of ſuſtenance.

Although the olive thrives very well in this iſland, it is very little cultivated. The different ſpecies of the palm-tree that are to be met with in ſome of the gardens, are cultivated only for curioſity.

We had been aſſured, before our departure from St. Croix, that we ſhould find the ſummit of the peak already covered with ſnow. I had not thought it neceſſary to take a barometer with me at ſetting out; but I found at Orotava that I had been led into a miſtake; and there I was unable to procure this inſtrument of obſervation *.

We purpoſed to proceed very early the next morning on our journey. But that happened to

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* We read, in the account of the Voyage of La Péroufe, that when the ſhip lay at anchor in the road of St. Croix, the mercury, in the barometer that Lamanon had taken with him, fell at the peak of Teneriffe to 18 inches 4 lines, whilſt the thermometer indicated $9\frac{3}{10}$° above 0, though, at the ſame moment of time, the barometer ſtood, at St. Croix, at 28 inches 3 lines, and the thermometer at $24\frac{1}{2}$°.

be a feſtival day, and our guides could not be perſuaded to ſet out before they had heard maſs; ſome of them had even heard three already: as for us, we waited for them with the moſt impatient ſolicitude, when our uneaſineſs was redoubled by being informed that we ought to conſider it as a very great indulgence if they would agree to travel at all on ſo high a feſtival. They were, however, at length ready to accompany us, about nine o'clock in the forenoon.

Having left the town, we purſued a track that often led us up very ſteep aſcents, from whence we obſerved enormous maſſes of mountains piled one upon the other, and forming a ſort of amphitheatre round the baſe of the peak. On their brows we frequently met with level ſpots that ſerved us for reſting-places, where, after having fatigued ourſelves with climbing up the rugged paths, we ſtopped for a ſhort time to take breath, and acquire freſh courage for aſcending the higher mountains.

Our guides were aſtoniſhed to obſerve that ſome of us choſe to go on foot, contrary to the cuſtom of the greater part of thoſe who make the tour of the peak; and inceſſantly admoniſhed us to ride upon the mules which they led along with them.

After having paſſed through ſome fine plantations of vines, we found ourſelves ſurrounded with cheſnut-trees, which cover the moſt elevated regions of theſe mountains.

In the clefts between the mountains, I obſerved the *polipodium virginicum*, and ſeveral ſpecies of the laurel that were new to me, amongſt the reſt the *laura indica* of Linnæus.

Although we purpoſed to perform our journey within a ſpace of not many days, we ought to have provided ourſelves with a larger ſtock of ſhoes; for even the ſtrongeſt ſoles were ſoon ground to pieces by the lava on which we walked.

It was near noon when we arrived at the height of the clouds, which ſpread a thick dew over the bruſh-wood through which our road led us.

One ſhould think that the abundance of rain which falls upon theſe heights, in conſequence of the natural propenſity of the atmoſphere,* muſt give riſe to a great number of ſprings. They are, nevertheleſs, very rare; as the earth is not ſufficiently attenuated to retain the water, which filtrating through the volcanic ſoil, diſcharges itſelf, for the greater part, into the ocean, without collecting into regular ſtreams.

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* We may here remark, that when high mountains become much heated by the rays of the ſun, they act as a kind of ſtove, by which the ſuperincumbent atmoſphere is elevated in conſequence of the dilatation which it undergoes. Hence ariſes the moiſture of the more diſtant part of the atmoſphere, which, ruſhing in to ſupply the place of that which has been ſent into higher regions by the action of the heat, carries with it the clouds ſuſpended in it; as I have had frequent opportunities of obſerving at Mount Libanon, where this phenomenon never fails to take place about five o'clock in the afternoon during the heats of the month of

As ſoon as we had ſurmounted theſe thick clouds, we enjoyed a ſpectacle beautiful beyond conception. The clouds heaped up below us appeared blended with the diſtant ocean, and concealed the iſland from our ſight. The ſky above us formed a vault of the moſt tranſparent azure, whilſt the peak appeared like an inſulated mountain placed in the midſt of a vaſt expanſe of waters.

Soon after we had left the clouds beneath us, I obſerved a phenomenon, which I had formerly had occaſion to remark, during my ſtay amongſt the high mountains of Keſroan in Natolia. It was with new ſurpriſe that I ſaw the outlines of my figure, delineated in all the beautiful tints of the rainbow, upon the clouds below me, ſituated oppoſite to the ſun.

The decompoſition of the rays of the ſun, by

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of September, unleſs ſome violent current of the atmoſphere ſhould happen to counteract its natural diſpoſition. Perhaps this may be the ſole reaſon of the attraction that appears to exiſt between mountains and clouds.

contact with the ſurfaces of bodies, affords a very ſatisfactory explanation of this ſplendid phenomenon. It exemplifies, upon a large ſcale, a fact well known to natural philoſophers; namely, that when the rays of the ſun are made to paſs through a ſmall hole in the window-ſhutter of a darkened chamber, ſo as to fall upon any object within it, they repreſent the outlines of the object in all the various colours of the rainbow, by being collected with a priſm and thrown upon a white ſheet of paper.

We now had to croſs a prodigious heap of pumice-ſtones, amongſt which we obſerved very few vegetables, and thoſe in a very languiſhing condition. The *ſpartium* was the only ſhrub that could ſupport itſelf in theſe elevated regions. It was very troubleſome walking upon this volcanic ſoil, as we ſunk into it up to the middle of the leg. We found ſome blocks of pozzolana ſparingly ſcattered among the pumice-earth.

At nine o'clock in the evening we took up our abode for the night in the midſt of the lava. Some large fragments that we found, were our only ſhelter againſt the eaſt wind, which blew with conſiderable violence. The cold was very intenſe at this height, where nature has not conſulted the convenience of travellers, as very little wood is found here; ſo that the ſcanty fuel that we were able to collect, was not ſufficient to prevent us from paſſing a very unpleaſant night.

The day at length began to dawn. We left ſome of our guides with their mules at the place where we had ſpent the night, and proceeded on our journey to the peak, which we were now in haſte to accompliſh.

We continued, for the ſpace of an hour, to travel over large heaps of fragments of a greyiſh coloured lava, amongſt which ſome blocks of pozzolana were ſcattered, as alſo huge maſſes of a very compact blackiſh glaſs, which bore a great reſemblance to the coarſe glaſs of bottles. This glaſs, though formed in the vaſt crucibles of the mountains at the time of their combuſtion, might become very uſeful in the arts; for being already completely manufactured by the hand of nature, it would only require to be expoſed to the action of the fire in order to fuſe it anew, and render it ſuſceptible of being moulded into all the forms that the hand of man is able to give to it.

We arrived at the mouth of a cavern called *la queve del ana*, the orifice of which is full four feet and a half in diameter. As its cavity runs for a length of more than ſix feet in an almoſt horizontal direction, we were not able to reach the bottom otherwiſe than by deſcending into it with the help of a rope. We found that it contained water, the ſurface of which, as was to have been expected at this height, was covered with ice about an inch and a half thick. We immediately made a hole in the ice, and regaled ourſelves with ſome excellent water. I did not feel any of thoſe diſagreeable ſenſations in the throat, which I have often experienced on the French Alps, from drinking the water which iſſues from the foot of the Glaciers; although the cold of the water in this cavern was one degree lower than that generally indicated by the water of the Glaciers, for upon plunging a thermometer into it, it fell to the freezing point. It ſeems that the diſagreeable pricking ſenſation occaſioned by the water of the Glaciers in the internal *fauces,* ariſes from its being deprived of its atmoſpherical air.

The roof of the cavern was covered with cryſtals of ſaltpetre.

Piron, who had been indiſpoſed for ſeveral days, found himſelf ſo overcome with fatigue as to be unable to proceed any further. Deſchamps alſo choſe to remain with him at the cavern: as for the reſt of us, we ſet forward on our aſcent to the ſummit of the peak.

Having reached its baſe, we ſaw it elevate itſelf before us in the ſhape of a cone, to a prodigious height, forming the crown of the higheſt of theſe mountains. From this ſpot our view extended over all the reſt of the mountains, which ſeemed to form ſo many gradations, that muſt firſt be ſurmounted before we can arrive at this commanding eminence.

At the place called *La Ramblette,* ſituated on the north-eaſt ſide of the peak, our curioſity was excited by ſome clefts made in the rock, a few of which were three inches wide; the reſt were merely cracks, from which iſſued an aqueous vapour that had no ſmell, although the ſides of the chinks were covered with cryſtals of ſulphur, ſhooting out from a very white earth, which appeared to be of an argillaceous nature.

A mercurial thermometer being introduced into one of the clefts, the quickſilver roſe, in the ſpace of a minute, to 43° above 0 of Reaumur's ſcale. In ſeveral of the others it did not riſe higher than 30°.

We were now engaged in the moſt toilſome part of our journey, the acclivity of the peak being exceedingly ſteep. When we had ſurmounted about a third part of the aſcent, I made a hole about three inches deep into the earth, from whence an aqueous inodorous vapour iſſued, and though the heat of the ſurface of the earth was not greater than it uſually is at an equal elevation, upon plunging a thermometer into it the mercury roſe to 51° above 0.

The *ſpartium ſupra nubium* was the laſt ſhrub that I noticed before we arrived at the foot of the cone; but there is an herbaceous plant which, notwithſtanding its apparent delicacy, vegetates even in ſtill higher ſituations. I mean a ſpecies of violet with leaves ſomewhat elongated, and ſlightly indented at the edges; its flowering time was already paſt. We obſerved it to grow quite near to the ſummit of the peak.

The vapours of the atmoſphere not being able to riſe to this height, the ſky preſents itſelf in the pureſt azure, which is more bright and dazzling than what we can ſee in the cleareſt weather of our climates. Though ſome ſcattered clouds hung in the atmoſphere far below our feet, we had ſtill a very perfect view of the neighbouring iſlands.

The cone is terminated by a crater, the greateſt elevation of which is on the north-eaſt ſide. Its ſouth-weſt ſide has a deep depreſſion, which ſeems to have been produced by the ſinking of the ground.

Near to the top are ſeveral orifices about three inches in diameter, from which a very hot vapour iſſues, that made Reaumur's thermometer riſe to 67° above 0, emitting a ſound very like that of the humming of bees. When the ſnow begins to fall on the ſummit of the peak in the latter part of the year, that which falls upon theſe orifices is ſoon melted by the heat. The ſides of theſe holes are adorned with beautiful cryſtals of ſulphur, moſtly of the form of needles, and ſome of them arranged into very regular figures. The action of the ſulphuric acid combined with the water, effects ſuch a change upon the volcanic products of this place, that at firſt ſight one might miſtake them for very white argillaceous earth, that has acquired a high degree of ductility from the moiſture conſtantly iſſuing from the above-mentioned apertures. It is in this kind of earth that the ſulphuric cryſtals which I have ſpoken of are found.

The decompoſition of the ſulphur, and the volcanic products, form an aluminous ſalt that covers the ground in needles, which have very little coheſion with each other.

The thermometer, when placed in the ſhade at the height of about three feet from the ſurface of the ground at the ſummit of the peak, roſe in a quarter of an hour to 15° above 0. No ſenſible variation was obſerved upon changing its diſtance from the earth, even by ſix or eight feet, which gives us reaſon to believe, that the internal heat of the ground in this place, though ſo very great, has little influence upon the temperature of the atmoſphere. Beſides, the air of the atmoſphere might eaſily be heated at this height by the rays of the ſun to 15°, as a higher temperature is often experienced at the foot of the Glaciers. I have often known the thermometer to ſtand at 20° above 0 upon mount Libanon, though placed quite cloſe to the ſnow.

The declivity of the mountain facilitated our return, and we deſcended much quicker than we had aſcended. It was already evening before we reached the place where we had paſſed the preceding night. The almoſt total want of ſleep, which we had experienced in conſequence of the intenſe cold, gave us little courage to ſpend another night at the ſame place. We therefore wiſhed to proceed immediately farther, in order to ſeek a better ſhelter upon ſome of the neighbouring mountains; but as our guides would not move a ſtep before the moon roſe, we were compelled to remain there till near midnight, waiting for its appearance. With the aſſiſtance of its feeble light, wede ſcended over the pumice-ſtones, following pretty cloſely the track which we had made for ourſelves in our aſcent.

After a march of four hours, the bruſh-wood, which grew very thick, obſtructed our way ſo much, that we were obliged to halt till day-break. We had here abundance of fuel, and made ourſelves amends for the cold of the preceding night, by immediately kindling a very large fire. Moſt of our company were ſo very much fatigued with their toilſome journey, that they had no other wiſh left than to make the beſt of their way back to St. Croix; although we had agreed at ſetting out from Orotava, that we would return by the oppoſite ſide of the mountains. But as we were no longer all of the ſame mind, it was ſettled that thoſe who had already ſatisfied their curioſity, ſhould return to the ſhips; whilſt the gardener and myſelf alone reſolved to complete our firſt deſign. All our guides wiſhed to accompany thoſe who were returning to the ſhips, ſo that it was with great difficulty that I could perſuade one of them to attend us.

I was gratified with finding among the plants that grew on the ſides of the rocks, the *campanula aurea*, the *prenantheſpinnala*, the *adiantum reniforme*, and a ſpecies of the *ceterac*, remarkable on account of its leaves, which are much larger than thoſe of the European ſpecies.

As theſe mountains afford very little water, we directed our courſe towards a ſmall habitation, where we preſumed we ſhould find ourſelves near to ſome ſtream of water. We were not diſappointed, for we came to a very fine ſpring of delicious limpid water, which loſt itſelf again under the ground, after having but juſt appeared above its ſurface.

Apple-trees loaded with fruit adorned the garden of theſe peaceable cottagers. This fruit taſted ſo delicious to the ſervant who accompanied us, that he took it into his head, whilſt we were employed in viewing the premiſes, to make an exchange that gave us a very poor idea of his foreſight. He had given away our whole ſtore of fleſh-meat for ſome of theſe apples, without taking a moment's conſideration whether or not they would be an equally good proviſion for us in travelling the mountains. We ſwore to ourſelves that we would never on a future expedition leave our ſtores in the charge of ſuch an œconomiſt. In general it may be remarked, that the ſervants employed at ſea are almoſt wholly unfit for ſervice on ſhore.

At the cloſe of the evening we were far from any habitation of men. About nine o'clock we reached a village, the inhabitants of which can certainly not be accuſed of carrying the virtue of hoſpitality to a blameable exceſs. It was not without the greateſt difficulty that we were able to procure ſhelter among them. As we did not underſtand the Spaniſh language, we were obliged to make uſe of ſigns to expreſs our meaning, a language that, in the night time at leaſt, is a very imperfect means of communication; but our guide, who was no leſs deſirous of going to bed than we were, went knocking in vain at one door after the other, till having gone round almoſt the whole village, we at length found two charitable ſouls who agreed to harbour us.

We were immediately ſerved with a frugal repaſt, during which the houſe was lighted in the manner that is practiſed by ſome of the inhabitants of the Alps. They ſet fire to ſmall ſplinters of very reſinous wood, ſtuck into the wall, which afford plenty of light, but throw out a great deal of ſmoke. One of our hoſts took the charge upon himſelf of lighting new ſplinters of wood as faſt as the former were conſumed.

We ſtood much more in need of ſleep than of meat, and haſtened to enjoy a repoſe, which proved the more delectable, as we were here no more incommoded with the cold we had experienced on the high mountains.

On the following day, the 19th, I went on board with my collection of volcanic products and ſome very fine ſpecimens of plants, ſuch as the *teucrium betonicum*, the *eſchium fruteſcens*, &c.

The birds known by the name of Canary-birds are very common in the lower regions of theſe mountains; their colour is a brown mixed with various other hues, and their plumage is not ſo beautiful in their wild ſtate, as it becomes when they are domeſticated. Some travellers have aſſerted, that an indigenous ſpecies of the parrot is found in theſe iſlands; but I have never ſeen any in my excurſions, and ſeveral credible perſons among the inhabitants have aſſured me that this aſſertion is deſtitute of foundation.

A very ſtiff gale, which ſprung up to-day, cauſed the ſea to ſwell to ſuch a height, as to drive on ſhore the pinnace of the Eſperance, after having overſet it upon one of the ſailors, who could not be extricated in leſs than a ſpace of ſeveral minutes. He was already ſuffocated to a great degree; but the means uſually employed in theſe caſes proved ſucceſsful in reſtoring him to animation.

Whilſt I here expreſs my gratitude to the garriſon of St. Croix, for the alacrity with which they haſtened to the relief of this unfortunate ſailor; I cannot paſs over in ſilence a piece of knavery committed upon this occaſion by ſome of the natives.

Whilſt we were adminiſtering our aſſiſtance to this man, we had hung up his clothes to dry, little ſuſpecting what ſhould happen. Some of the inhabitants of the town, perhaps conceiving him already dead, thought fit to appropriate his clothes to the uſe of the living: they were accordingly carried off, and all purſuit after the robbers was in vain.

Citizens Riche and Blavier, engaged in the ſtudy of natural hiſtory, had undertaken a journey to the peak the day after we had ſet out upon ours; but they did not ſucceed in reaching the ſummit; for whilſt they were ſtill at a conſiderable diſtance from it, their lungs being unable to accommodate themſelves to the rarefied atmoſphere, they were ſeized with a ſpitting of blood, which obliged them to relinquiſh their enterprize.

The following days were employed by us in viſiting the environs of St. Croix, where the country is in general very barren.

The town is very thinly peopled, even in proportion to the ſmallneſs of its extent; though the harbour here is more frequented than any other in the iſland. The Spaniards have introduced here their own manner of building. The diſtribution of the internal part of the houſes is the ſame with that which they practiſe in Europe, without any of thoſe modifications which the difference of the climate requires.

The Governor-general of the Canary-iſlands uſually reſides at St. Croix. There are ſeveral convents of monks and nuns in this place. One of the parochial churches here is equally remarkable for the taſteleſs profuſion with which the gilding is laviſhed upon it, and the bad choice of its paintings.

In the market-place there is a fine fountain, the water of which is conveyed from a great diſtance by wooden pipes through the mountains. The ſtreets are ill-paved; moſt of the windows are without glaſs-panes, lattices being uſed inſtead of them, which the women very frequently open, when curioſity, or any other motive, prompts them to let themſelves be ſeen.

Women of condition dreſs after the French faſhion; thoſe of the lower ranks cover their ſhoulders with a piece of coarſe woollen ſtuff, which forms a ſort of cloak very incommodious in this hot climate; broad-brimmed hats of felt ſhelter their faces from the rays of the ſun; intermarriages with the natives render their complexions darker than thoſe of their countrywomen; and their features are upon the whole rather diſagreeable.

The multiplicity of religious obſervances practiſed by the inhabitants were not ſufficient to prevent the women from going, with their chaplets in their hands, to meet our ſailors, whenever they came on ſhore, ſome of whom have had to repent for a long time their having been ſeduced by ſuch a ſuperabundance of attractions.

The wine of Teneriffe, which, as I have already obſerved, is very heady, was likely to have been the cauſe of very fatal conſequences to one of our ſailors, who, in a fit of intoxication, committed a very heinous offence upon a ſentinel. The French Conſul, however, made uſe of his intereſt with the officer who had the command during the abſence of the Governor-general, ſo as to prevent any cognizance being taken of the matter. The diſcipline obſerved on board the Engliſh ſhips effectually ſecures them from any of theſe diſagreeable occurrences.

The Scorpion ſloop of war, of ſixteen guns and one hundred men, commanded by captain Benjamin Hallowell, had caſt anchor in the roads on the 18th, conſorted by a ſmall cutter. They had ſailed from Madeira five days before, where they had left a veſſel of fifty guns, which was expected ſoon to arrive at Teneriffe. Commodore Englefield who commanded it, had alſo the general command of this ſmall armament, which was deſtined for the coaſt of Africa. Theſe officers, aware of the danger to which ſailors are expoſed whilſt they remain on ſhore, kept them as much as poſſible on board; and never ſuffered them to quit the ſhip but when the exigences of the armament required it. The Commodore was reſolved to keep ſtrictly to this regulation, during the whole time that he ſhould be ſtationed on the coaſt of Africa.

The variation of the needle was found by an average of ſixteen obſervations taken on board, fourteen of the azimuth and two of the ortive amplitude, to be 8° 7′ 7″ E.

The reſult of two obſervations taken by Citizen Bertrand, one of the aſtronomers to the expedition, on the terrace of a houſe in the town, gave 21° 33′ E.

The obſervations taken on board appeared more to be confided in than the others, as they agreed with the progreſſive diminution of the variation which we had obſerved ſince our departure from Breſt, and with the obſervations that had been taken long ſince by different other navigators.

The dip of the needle was now at 62° 25′. The ſame needle had pointed 71° 30′ at Breſt, and 72° 56′ at Paris.

The place where we lay at anchor in the road of Teneriffe was 28° 29′ 35″ N. lat. 18′ 86′ E. long.

The thermometer and barometer, obſerved on board towards noon, varied very little during our ſtay in this place. The former never roſe above 20° two tenths, nor the latter above 28 inches two lines.

The ſtation of St. Croix is a very excellent one, on account of the plentiful ſupply which it affords of all ſorts of European kitchen-vegetables, cabbages excepted, which, though very ſmall, are ſold at an exorbitantly high price. Moſt of the orchard-fruits of Europe are likewiſe to be met with here, and the ſame domeſtic animals as in the ports of France.

Experience had taught us that the ſheep of this iſland do not bear confinement on board ſo well as ours. The pure air which they have been accuſtomed to breathe on the mountains where they feed, renders them the more ſuſceptible of injury from the impure air between-decks.

Teneriffe alſo affords great abundance of dried fiſh. They particularly carry on an extenſive traffic with the ſpecies termed *bonite*.

Thoſe parts of the iſland upon which the labour of cultivation has been beſtowed, are very fertile, as is generally the caſe in volcanic iſlands. The internal heat of the earth which forms their baſis, exhales towards the ſurface of the ground a portion of the rain-water which they have imbibed, which produces a remarkably luxuriant vegetation.

On the other hand the too ſlow decompoſition of ſome of theſe volcanic ſtones, and the extreme dryneſs of ſome of the mountains, render many parts of the iſland unfit for cultivation. The action of the fire to which they have been expoſed at different periods after long intervals, as is atteſted by hiſtorical records, together with the ſhelter which they receive from the plants peculiar to thoſe ſituations, retarding in many places that gradual decompoſition which would otherwiſe have taken place, had they been left entirely bare.

No volcanic eruption had been known in this iſland, ſince that which broke out ninety-two years ago, till in the month of May, 1796, a new eruption took place on the ſouth-eaſt ſide of the peak, as I was informed by Citizen Gicquel, officer of marines, who ſpent ſome time at St. Croix on his return in the frigate La Régénérée from the Iſle de France.

I ſhall inſert the account which I received of this event from Citizen le Gros, Conſul of the French Republic.

"On the 21ſt day of May, 1796, the inhabitants of St. Croix heard ſome hollow reiterated ſounds, very like the diſtant report of cannon; in the night-time they felt a ſlight trembling of the earth, and on the following morning a volcano was obſerved to have broken out on the ſouth-eaſt ſide of the peak. During the firſt days after its eruption, it appeared to have fifteen mouths, their number was ſoon reduced to twelve, and at the end of a month only two were to be ſeen, which threw out with their lava large maſſes of rock, that often preſerved their line of projection for a ſpace of fifteen ſeconds before they fell to the ground."

Before our arrival at Teneriffe our veſſels had been ſo encumbered with their ſtores, that we ſcarcely knew how to diſpoſe of our crew.

CHAP. II.

We depart from Teneriffe, and ſet ſail for the Cape of Good Hope—Obſervations—Splendid Appearance of the Surface of the Sea, produced by phoſphoric Light—The moſt general Cauſe of the Phoſphoreſcence of the Sea-water aſcertained—Four of our Sheep which we had brought from Teneriffe are thrown into the Sea—Moderate Temperature of the Atmoſphere near the Line—The Variation of the Compaſs greater on the South than on the North Side of the Equator—Eaſy Method of rendering ſtagnated Water freſh—Thick Fog, which cauſes the Mercury in the Barometer to riſe—Lunar Rainbow—Arrival at the Cape of Good Hope.

A VERY high ſwell of the ſea had prevented us almoſt two days from getting our proviſions on board. We were not ready to ſet ſail till the 23d of October.

We endeavoured at the firſt dawn to get under way. All our boats had been taken on board the preceding day as ſoon as we had unmoored; as we wiſhed to take advantage of the land-wind, which blows here almoſt every morning. It was likewiſe neceſſary that we ſhould put out to ſea before the flood-tide, which was expected to ſet in about half an hour after five.

We held by a cable to the Engliſh corvette. I cannot omit this opportunity of commending the polite behaviour of the Engliſh captain, who gave us, in the moſt obliging manner, every aſſiſtance that we ſtood in need of to enable us to get under way. Our Commander on his part had likewiſe done him every ſervice in his power, when he came to anchor in the roads a few days after our arrival. One of the anchors of the Engliſh ſloop helped us to heave down, and having ſpread our ſails, we ſteered off from the coaſt under a ſlight breeze, which did not continue long enough for the Eſperance to take advantage of it, although ſhe had unfurled her ſails a few minutes after our veſſel. Carried away by the flood, the force of which had not at firſt been perceived, ſhe was obliged to caſt a ſmall anchor, by which ſhe hauled, in order to keep off from the coaſt while ſhe endeavoured to ſtand clear of the veſſels about her.

At half after nine o'clock ſhe ſtood towards us. We then directed our courſe S. S. E.

At noon we were in 28° 5′ 40″ N. lat. 18° 36′ 40″ E. long. At this ſpot we ſet the peak of

Teneriffe E. 28° N. and the eaſtern point of the iſland of Canary E. 24° S.

We then ſteered, about one o'clock in the afternoon, S. E. S. with a view to paſs between the Cape Verd iſlands and the main land. We had a pretty freſh eaſt breeze.

About ſix in the evening the iſland Gomere bore N. 38° E.

On the 26th, the Eſperance told us her longitude, after having enquired to know ours. The great difference between the longitude of our reckoning, and that taken by obſervation, threw us into ſome uncertainty, which induced us to bear down two rhomb-lines ſtarboard from our former S. E. S. courſe; but ſubſequent obſervations determined us to reſume our firſt direction. The weather was very fine, and we had nothing to fear from approaching the African coaſt: beſides, we knew from our ſoundings that it was many leagues diſtant.

On the following morning we were out of ſight of land, which convinced us that the obſervations taken on board the Eſperance were erroneous.

We croſſed the Tropic of Cancer about one o'clock in the afternoon, in 20° E. long. The barometer indicated 28 inches 2 4-5ths lines.

The firſt fiſh that would bite at the hook of our fiſhermen, was a very fine dorado *(coryphæna hyppurus)*. This was ſufficient to put the whole crew in motion; but the fiſherman had the mortification of finding only a part of its gills upon his hook, as he had drawn the line too haſtily.

Since our departure from Teneriffe the wind had blown pretty ſteadily from the N. E. point.

A ſwallow of the common ſpecies *(hirundo ruſtica)*, undoubtedly lately come from Europe, followed us for ſome time, without lighting upon the veſſel; but ſoon directed its flight right towards the African coaſt, where it was ſure of finding the inſects on which it feeds. We were now about 28° N. lat. 22° 30′ E. long.

As there was very little wind, we obſerved a great number of the *meduſa caravela* floating upon the ſurface of the water. This plant ſhould not be touched unguardedly, as, like many other kinds of ſea-nettles, it raiſes bliſters upon the hand, that afterwards become very painful.

The ſpecies of remora, known by the name of *echineis remora*, generally follows the ſhark, as it finds ſufficient nouriſhment in the excrements of that voracious fiſh. It does not, however, attach itſelf ſo excluſively to the ſhark as not to follow other large fiſhes alſo, and even veſſels, to which it fixes itſelf when it is fatigued with ſwimming.

In the night we obſerved that our veſſel was followed by a large ſhoal of dorados. As they ſwam much faſter than we ſailed, they often moved in a circular courſe round our veſſel with incredible ſwiftneſs. Although the night was very dark, it was eaſy to follow them with the eye, as they leave a luminous track behind them. This phoſphoric light, produced in the agitated water of the ſea, appears the more brilliant in proportion to the darkneſs of the night, and the velocity with which the fiſhes move; ſo that we were able to diſcern their track very diſtinctly, although they ſwam ſeveral feet below the ſurface of the water.

30th. We were now in thoſe ſeas that abound with voracious fiſhes, ſuch as the *bonito,* the *tunny,* and others of the ſame claſs, which find plenty of food amongſt the different ſpecies of fiſh on which they prey; the principal of which is the flying-fiſh (*exocœtus volitans,* Linn.). The bonitos that followed us were eaſily caught by our fiſhermen, though they uſed no other bait than a bunch of feathers, bound up ſo as to reſemble a flying-fiſh, within which the hook was concealed.

We had been almoſt becalmed for ſome time, but the regular winds began to recover their force. They were again interrupted on the 3d of November by a ſtorm, which continued during the whole night; the next morning they blew as on the preceding days. On the 6th they left us at 9° 6′ N. lat. 21° E. long.

The heat was now exceſſive, though the thermometer was only 23° above 0 of Reaumur's ſcale.

A bird, called by Buffon *goeland noir (larus marinus*, Linn.), having lighted upon one of the yards, eſcaped from a ſailor, who had climbed up the maſt, in the very inſtant when he was about to ſeize it.

A prodigious number of bonitos followed us day and night; and it was a matter of great aſtoniſhment to us, that they were able to keep up with us ſo long without taking any reſt.

The *motteux* of Buffon *(motacilla amanthe*, Linn.), fatigued with its long flight over the ſea, lighted upon our veſſel, and ſuffered itſelf to be taken.

We were becalmed for ſeventeen days in lat. 5° N. We afterwards had ſtorms, followed by ſqualls, that varied from E. N. E. to S. S. W. having veered round by ſouth.

The tempeſt-bird *(procellaria pelagica*, Linn.) is not ſo ſure an indication of a ſtorm, but that its appearance is often followed by a calm of ſeveral days duration. It was a pleaſing ſight to obſerve theſe little birds flying cloſe to the ſtern of our veſſel, in queſt of their food, which they find upon the ſurface of the ocean.

We were mortified to find that the vegetables and fruits, which we had bought at Teneriffe, did not keep; as their corruption was greatly accelerated by the heat and moiſture that prevails during the calms of this zone. We had reaſon to believe that as they had been gathered in a very hot and dry climate, they would have kept much better than thoſe of Europe.

A ſmall ſhark (*ſqualus carcharias*, Linn.) fell a victim to his voraciouſneſs. As ſoon as they had hauled him on deck, he was immediately cut in pieces, and every one had his ſhare. The ſhark however is very poor food; for beſides the natural abhorrence which the fleſh of an animal that devours human bodies muſt excite, it is very difficult of digeſtion: but at ſea we cannot chooſe our diſhes, and freſh proviſions are always preferable to ſalted.

I found attached to the higher orifice of his ſtomach a number of worms of the genus *doris* of Linnæus. They were about an inch and a half in length, and did not eaſily let go their hold, although the ſhark was dead. I obſerved them now and then ſhoot out the two *tentacula* that belong to the characteriſtics of this genus.

The ſituation of the mouth of the ſhark, under his long upper jaw, obliges him to turn himſelf almoſt round upon his back in order to ſeize any object above him; ſo that his white belly, which the tranſparency of the ſea-water renders diſtinguiſhable even at a great depth below the ſurface, points out to the fiſherman the exact moment when he ought to draw his line, in order to faſten this voracious fiſh to his hook.

Nature has amply provided it with the means of ſecuring its prey; for beſides ſeveral rows of teeth formed in the manner moſt adapted for penetrating the hardeſt bodies, the internal part of the mouth is likewiſe furniſhed with various aſperities that ſerve to prevent the egreſs of any ſubſtance that it has laid hold of.

Had we been trading to India, we ſhould not have failed to collect a quantity of the fins of this fiſh, as they are in great requeſt amongſt the Chineſe, who believe them to be a very powerful aphrodiſiac.

When the air was calm the heat was extremely oppreſſive: the thermometer however ſtood no higher than 23°; although we were not more than 9° north of the equator. Our longitude was 20° 50′ eaſt. It appears that in theſe parts the thermometer affords a very inadequate ſtandard of the ſenſible heat of the atmoſphere; for though it indicated ſeveral degrees lower than what we frequently experience in the warm ſummer weather of Europe, the heat threw us into a moſt profuſe perſpiration, which gave riſe to very troubleſome effervesſcences of the blood.

Between the tropics, the mercury in the barometer ſtands at a very uniform height. We never obſerved it to vary more than an inch and a half, more or leſs. It generally ſtood at 28 inches 2 lines, although the atmoſphere was often agitated by violent ſtorms, which being generated in the interior of Africa, from the coaſt of which we were not more than about 300,000 toiſes diſtant, were brought over to us by winds from N. E. and E. N. E.

12th. We here caught the fiſh known among the ichthyologiſts by the name of *balliſtes verrucoſus*. A great number of a ſmall ſpecies of whales *(ſouffleurs)* ſwam about our ſhips, followed in their tardy courſe by ſharks which fed upon their excrements.

A ſquall from the S. E. gave us intimation of the gales from the ſame quarter, that prevailed in the diſtant regions under the equator; though they blow there generally from the N. E. during this ſeaſon, when the ſun remains almoſt two months within the Tropic of Capricorn.

14th. A ſhark that had been preceded by a number of the fiſhes called *pilots (gaſteroſteus ductor,* Linn.)

Linn.), was caught by our ſailors. Some remoras, that thought themſelves in ſafety as long as they remained fixed to the body of the ſhark, kept their hold ſtill for a conſiderable time after the fiſh had been brought upon deck.

As the weather was exceſſively hot, and the ſea very tranquil, Piron and Saint-Agnan, unable to reſiſt their deſire of cooling themſelves by bathing, plunged themſelves a few hours afterwards into the ſea, at the hazard of becoming the prey of another ſhark.

It had remained calm almoſt the whole day; but about eight in the evening the ſkies were covered to the ſouth-eaſt with thick clouds, that portended a violent ſtorm. The night was very dark; and ſoon a luminous column of immenſe height was ſeen to deſcend from theſe clouds, and illumine the ſurface of the water. The ſcintillation of the ſea was for ſome time interrupted by ſeveral intervals, during which it was quite dark; when all of a ſudden the whole ſurface of the ſea appeared covered with a ſheet of fire, extending in our direction. This ſheet was puſhed along by a very high gale, which raiſed the waves to a great pitch; and we ſaw ourſelves ſurrounded with a ſea of flames, which afforded one of the moſt brilliant ſpectacles in nature. This phenomenon very ſoon diſappeared; but the ſea appeared during the whole night much more luminous than uſual wherever it was agitated, particularly at the wake of the ſhip and the top of the waves.

The force of the gale had obliged us to ſtrike our top-ſails, and even to bear down, for fear of being taken a-back.

The heat had been very oppreſſive during the whole day. We were now ſailing off the immenſe gulph formed by the coaſts of upper Guinea, the ſhores of which extend almoſt 1,500,000 toiſes to the eaſtward.

The ſea is much more phoſphoric in the vicinity of the coaſts ſituated between the tropics, than any where elſe, becauſe thoſe animals, upon which its phoſphoreſcence depends, abound there much more than in any other part of the ocean: a fact, which I have had opportunity of remarking in parts of the ocean very diſtant from each other. I ſhall enter into ſome inveſtigation of this phenomenon.

As we had this gulph under our lee, the currents had carried over to us many of the luminous ſubſtances with which it abounds; but it required the concurrence of another circumſtance in order to produce ſo vivid a light as we witneſſed. The clouds that hung over the quarter from whence the wind aroſe, had imparted to the atmoſphere a ſuperabundance of electricity, which was one of the principal agents in producing the luminoſity of the water.

The electric ſtate of the atmoſphere was proved to me by the unuſual repulſion between the two balls of my electrometer.

15th. A ſlight breeze from the ſouth-eaſt led us to hope that we ſhould ſoon be delivered from the calms, that prevail to a greater extent in theſe ſituations than in any other part of the ocean. Theſe differences are particularly obſervable upon a voyage to India, and appear to depend chiefly upon the vicinity of the African coaſt, to which ſhips, ſailing from Europe to the Cape, approach much nearer, than thoſe which ſail from the Cape to Europe: thus the former voyages generally require a longer ſpace of time to be accompliſhed than the latter.

Many able ſeamen think it adviſable to croſs the Line much further to the eaſtward than is commonly done.

The calms which prevail northward of the equator depend upon the configuration of the African coaſt, which projects, at the diſtance of a few degrees from the Line, nearly 1,500,000 toiſes eaſtward; whilſt the great diſtance at which one ſails from the coaſt, after having croſſed the equator, prevents the winds, generally prevalent in this part of the ocean, from being modified by the land breezes.

I had kept ſome bottles of the ſea-water, which I had collected the night before, during its phoſphoreſcence, for the purpoſe of examining the ſmall luminous ſubſtances which occaſion this phenomenon. Having incloſed ſome of this water in a vial, I agitated it in the dark, and preſently obſerved luminous globules ariſing within it, which appeared perfectly ſimilar to thoſe that are ſeen in the agitated water of the ocean. I tried the ſimple experiment of ſeparating theſe particles from the water, in order to learn whether it would ſtill retain its phoſphoreſcent quality. Upon filtrating it, by means of a piece of blotting-paper, a number of minute tranſparent particles, gelatinous in their conſiſtence, and of a globular form, were left upon the filtre. The water had now entirely loſt its phoſphoreſcent quality, which I again reſtored to it by mixing it with thoſe particles. If theſe ſmall animalcula be expoſed for any conſiderable time to the air, they loſe their phoſphoreſcent properties.

I have frequently repeated the ſame experiment upon water collected in different parts of the ocean, and have uniformly found it to contain the ſame ſort of animalcula, which I therefore conſider to be the principal cauſe of the phoſphoreſcence of the ſea. Other ſubſtances, however, poſſeſs likewiſe the property of giving this appearance to the ſea; for many ſpecies of the crab, and other marine inſects of conſiderable bulk, ſometimes aſcend from its bottom, and give a luminous appearance to the ſurface. I have ſeen ſome of theſe phoſphoric animals of more than half a foot in length, but they were always accompanied by the ſmall animalcula above mentioned.

We were informed to-day that they had thrown into the ſea, from on board the Eſperance, four of the ſheep they had brought with them from Teneriffe, becauſe ſome perſons had imagined that they had obſerved upon them ſymptoms of that diſeaſe which our nation is accuſed of having imported into Europe, from America. The monks of the iſland from whence they had brought the ſheep, had to ſuffer many ſevere ſarcaſms upon this occaſion; though I believe them to have been deſtitute of foundation; for I have little doubt, that if the animals had been ſubjected to a more accurate examination, the crew would not have been deprived of ſo conſiderable a part of their live ſtock.

Breezes from the S. S. E., which began to blow on the 21ſt of November, we being in lat. 4° 31′ long. 18° 30′ W. at length put an end to the calms, which at this period of the year are generally experienced ſeveral degrees further to the ſouth, before one arrives at the track of the regular winds.

The bird known among ornithologiſts by the name of *pelecanus aquilus* excited our admiration. We obſerved two of them who, whilſt they hovered at an immenſe height, eſpied their prey in the water, expecting the moment when it ſhould appear near enough to the ſurface for them to dart down and ſeize it.

The reaſon why theſe birds hover at ſuch a prodigious height above the ocean, is, undoubtedly, that they may take in a more extenſive view of its ſurface; but it is aſtoniſhing that they are able at that diſtance to perceive the ſmall fiſhes upon which they generally feed. It is a ſubject well worthy to be inveſtigated by natural philoſophers, whether this piercing viſion depends more upon the ſenſibility of the retina, or (as I rather ſuppoſe it does), upon the diſpoſition of the humours of their eye.

The pelican is known to be a great deſtroyer of the flying-fiſh. As ſoon as it eſpies one of theſe fiſhes, it deſcends from the more elevated regions of the atmoſphere, and remains hovering about fifty toiſes above the ſurface of the water, in order to ſeize its prey whenever it quits the ſea.

All the motions of the pelican are conducted with admirable dexterity: it does not dart head foremoſt, like moſt other birds that ſeek their food in the water; but placing its feet and neck horizontally and level with each other, it ſtrikes the air above it with its pinions, and then laying them croſsways upon its back, ſo as to afford the leaſt poſſible reſiſtance to the atmoſphere, darts down upon its prey, and ſeizes it almoſt the inſtant it has left the water.

We all of us pitied the poor flying-fiſh when we obſerved the aſtoniſhing ſkill of its enemy, which very ſeldom miſſes its aim. As the flying-fiſh raiſes itſelf but to a very ſmall diſtance from the ſurface of the ſea, the pelican would run the riſk of falling into the water, did it not poſſeſs the art of breaking its fall by ſuddenly expanding its wings, ſo as to be immediately able to mount again in queſt of another victim.

Though nature has given the flying-fiſh the power of living both in the water and in the air, it is very difficult for them to eſcape from their numerous enemies. If they evade the purſuit of the bonitos and dorados, by quitting the water, the pelican awaits them in the air. Some of them, reduced to this dilemma, were obliged to light upon our veſſel.

I found in the ſtomachs of ſeveral bonitos a number of worms, that ought to be claſſed among the genus *faſciola* of Linnæus, though their inferior extremity, which is almoſt cylindrical, has a very diſtinguiſhable bulb. They are about four lines in length, and terminate in a tube which compoſes about half their dimenſions.

The winds from the ſouth and ſouth-eaſt continued to blow with ſuch obſtinacy, that we were not able to croſs the Line till in the night of the 28th, about eleven o'clock, in 26° E. long. though our deſign had been to croſs it about eight or ten degrees farther eaſtward.

Theſe ſouth and ſouth-eaſt winds are not common in theſe latitudes at this time of the year; for the ſun being already conſiderably advanced in the Tropic of Capricorn, the regular winds generally veer round to the eaſt. The calms, in conſequence of which we had got every day 6 or 8′ further northward, and the gales from the ſouth and ſouth-eaſt, were the cauſes of our being ſo long detained by theſe winds.

Near as we were to the Equator, the thermometer, as obſerved for the laſt eight days, had not ſtood higher than 21 or 22°. It was a matter of ſurpriſe to us, that being ſo near the Line, the thermometer did not indicate a higher degree of heat; but beſides general cauſes, ſuch as the abſorption of the rays of the ſun by the water of the ocean, and the comparatively inferior denſity of the water, together with the evaporation that takes place from it, which prevent an equal degree of heat being communicated to the atmoſphere with what it acquires from the land, we had for ſeveral days had a ſlight breeze which contributed not a little to cool the air.

The ſailors have a cuſtom of ducking perſons who croſs the Line for the firſt time, with the ſea-water. This operation is performed by pouring ſeveral pails of water over their heads; and is frequently conducted in ſuch a manner, as to afford a great deal of merriment to thoſe who know themſelves exempted from being the ſubjects of it. One of the ſailors, who calls himſelf the Good Man of the Line, lets himſelf down from the main-top, with a large beard of tow faſtened to his chin, and preſides at this nautical diverſion.

Our Commander, apprehenſive that this ſort of cold bathing might not agree very well with ſome of us, forbade its being performed upon any of the paſſengers.

On the 29th of November, Beaumé's aëro-meter for ſalts gave me 3° 4-5ths. We were then half a degree ſouth of the Line.

The currents carried us ſomewhat eaſtward of our former courſe. The principal cauſe of the different currents in the wide ocean is known to ariſe from the action of the winds. We had every reaſon to expect a long paſſage. The Eſperance, however, kept her luff much better than our veſlel. We were apprehenſive leſt our want of water might put us under the neceſſity of ſteering for the coaſt of Brazil. This circumſtance would have been the more embarraſſing to us, as it would have deranged the whole plan of our expedition; for the inveſtigations we intended to make in ſeveral of the countries that we were about to viſit, were to be determined by the ſeaſon of the year.

On the 17th of December we croſſed the Tropic of Capricorn, in 28° W. long.

On board the Eſperance they often caught more than a hundred bonitoes in the courſe of a day, whilſt the moſt dexterous fiſhermen in our veſſel never took more than ten in the ſame ſpace of time, and very ſeldom as many. It was however a matter of great conſequence to the health of the crew, that they ſhould be ſupplied with freſh proviſions.

On the 18th of December we were in lat. 25° 20′ S. and long. 28° 42′ W. when the thermometer obſerved at noon indicated only 19° above 0, although the ſun was very near our zenith: before ſun-riſe it had been 17½°. In the night-time the cold had been ſo conſiderable as to oblige our ſailors to take to their woollen clothes.

We had thought ourſelves ſure of meeting with eaſterly gales as we approached the Brazilian coaſt: they, however, blew from the eaſt; but having drawn aft, we were enabled to keep our ſails pretty full for the ſpace of a fortnight, till we were in 28° S. lat. and 24° W. long.

We might have expected in this latitude to meet with favourable winds for ſteering towards the Cape of Good Hope; but all the variation that took place was ſtill more to our diſadvantage.

On the 28th of December we had ſtill S. E. winds, though we were already beyond 29½° S. lat. The heat of the ſun having been for ſeveral months at its greateſt height in this hemiſphere, had changed the direction of the regular winds.

The length of our paſſage had reduced our allowance of water to one bottle a day.

As ſoon as the winds had veered from N. E. to N. the currents, which bore till then to the eaſt, became ſcarcely perceptible.

Though we were at ſo great a diſtance from the Cape of Good Hope, we obſerved a great number of albatroſſes *(diomedea exulans.)*

It is a remarkable circumſtance, that the variation of the magnetic needle is much greater to the ſouth of the Line, than it is to the north;

for between 14° N. lat. and the Equator, in the ſpace contained between 23° and 26° W. long. the difference had not been more than 3°, or from 14° to 11°; whilſt in the ſame extent of ſouth latitude, between 26° and 30° W. long. the compaſs varied eight degrees to the eaſt, or from 11° to 3°. Might not the vicinity of the coaſt of Brazil be one of the principal cauſes of this difference?

The ſmalleſt variation obſerved was that of 1° 50′, in 25° S. lat. and 29° W. long. It cannot be doubted that the change of ſituation with reſpect to longitude has a much greater influence upon the variation of the needle, than change of latitude. The variation increaſed ſenſibly in proportion as we advanced farther eaſtward.

One of our officers who was taking the diſtances between the ſun and moon, in a very incommodious ſituation, with a copper ſextant made by Dollond, the radius of which was a foot in length, diſcovered a cauſe productive of error in the calculations, which one ſhould hardly have ſuſpected. The radii of this inſtrument, though very heavy, were ſtill ſo ſlender as to bend when it was preſſed with any degree of force againſt the breaſt, whereby the paralleliſm of the ſpecula was deranged. The ſame effect does not take place with ſextants made of wood, for their radii, being much ſtronger than thoſe of copper, do not yield to that degree of preſſure which bends the others.

This ſource of error affords an additional reaſon why mariners ought to give the preference to the circle of reflexion, invented by Citizen Borda. The facility with which any errors that may ariſe from the graduation, are rectified by croſs obſervations, in the uſe of this inſtrument, gives it a very great ſuperiority over all others.

I regret that this valuable inſtrument, though ſo eaſy in its application, is not more generally in uſe. Each of our officers poſſeſſed one of them, and during the courſe of the expedition every one learnt to uſe it with certainty.

With a little practice an obſerver may take the longitude within 10, or 15,000 toiſes; and there is reaſon to believe, that when the lunar tables ſhall have attained a greater degree of perfection, the obſervations will approximate ſtill nearer to the truth.

Though the plants which I had collected at Teneriffe were very dry when we ſailed from that iſland, they were become much damaged by the moiſture which they had imbibed, during the time that we were between the Tropics, particularly at the lower part of the leaves, where the abſorbent veſſels of the plant are known to abound more than in any other of its parts.

The water held in a ſtate of ſolution by the atmoſphere, in conſequence of the heat which it acquires from the perpendicular rays of the ſun, is ſo much greater in quantity than what it can retain in ſituations not expoſed to an equal degree of heat, that every thing that is not expoſed to the direct rays of the ſun, becomes covered with a great degree of moiſture; ſo that it is very difficult to preſerve inſtruments of iron, or even of the moſt highly poliſhed ſteel, from the ruſt.

During the whole period of time that we were ſailing round the Tropics, the barometer had not ſtood higher than 28 inches 4 lines, nor lower than 28 inches 1 1-10th lines.

We knew very well that our proviſion of water could not retain its freſhneſs in the extreme heat of this climate; but one ſhould hardly have imagined, that whilſt we had means on board of reſtoring its purity, they ſhould not have been put effectually in practice, before diſtributing to the crew their daily allowance.

Water that is kept for a long time on board, undergoes the ſame ſort of decompoſition which takes place in ſtagnant pools; and this proceſs is conſiderably accelerated by the influence of a hot climate. A great quantity of inflammable air is then diſengaged from it; ſo that a perſon who goes into the hold where it is ſtowed, runs the hazard of being ſuffocated. This, however, is an accident that very rarely happens, as a part of the noxious vapours are diſcharged by the paſſage leading into the hold. Nevertheleſs, theſe vapours frequently give riſe to nervous fevers amongſt the crew, the malignity of which, is in proportion to the heat by which the decompoſition of the water is effected.

As this *gas,* the ſpecific gravity of which was firſt determined by Prieſtley, is conſiderably lighter than atmoſpherical air, and has likewiſe very little attraction for the water; it is very eaſily ſeparated, ſo as to reſtore water to its former purity; nothing more being neceſſary than to agitate the fluid for the ſpace of a quarter of an hour.

We had a machine on board which was perfectly adapted to this purpoſe. It conſiſted of a large bucket, about five cubic feet in capacity, which being filled to about two-thirds with water, four large flat pieces of iron were turned round in the middle of the veſſel, by means of a handle and balance-wheel. By this operation the water in the bucket was violently agitated, and whilſt the inflammable air, with which it had been impregnated, was diſengaged, it abſorbed a quantity of pure air from the atmoſphere, to ſupply the place of that which it had loſt; ſo that, putrid as it had been before, it ſoon recovered its original freſhneſs.

This proceſs, ſo eaſy in its execution, affords a ſatisfactory anſwer to the many enquiries that have been made concerning the means employed by mariners to render water potable, after it has loſt this quality by being kept long in the ſhip.

It will ſcarcely be credited, that though we were able to purify the water according to the ſimple method juſt deſcribed, that which was diſtributed in the veſſel often ſtunk nearly as much as when it was firſt brought out of the hold. The cauſe of this neglect aroſe from the circumſtance, that the officer, who had the charge of inſpecting the operation, uſually committed it to one of the ſailors, who, ſoon tired with turning the handle, delivered it out before it had become potable. It was very juſtly obſerved on board, that it would have been much better had this charge been committed to the ſurgeon, as the health of the crew depended ſo much upon its being well performed. It was nevertheleſs left in the hands of the officer of the watch.

On the 29th of December, the ſky being very clear, the thermometer indicated 17° 8-10ths, and the barometer 28 inches 39-10ths lines;

when a breeze ſuddenly ſpringing up from N.N.E. brought with it a thick fog, which concealed the ſun from our view for the ſpace of a quarter of an hour. It is very remarkable that the mercury in the barometer, inſtead of falling in conſequence of this change of weather, ſtood a line and a half higher than before, during the whole time that the fog continued. I dare not hazard any conjecture of my own in order to account for this phenomenon, which will appear the more aſtoniſhing to perſons converſant in natural philoſophy, as this circumſtance ought to have diminiſhed the elaſticity of the air inſtead of augmenting it: beſides, there was no reaſon to believe that the fog was occaſioned by the exploſion of any volcano.

On the 3d of January we enjoyed the ſpectacle of a lunar rainbow. This planet was encompaſſed, at ten o'clock in the evening, with two concentric circles, that preſented all the colours of the ſolar rainbow in reverſed order. The largeſt of the circles did not occupy more than five degrees in the ſky.

As this phenomenon, produced by the decompoſition of the rays of the moon, appeared between the planet and us, the priſmatical colours naturally preſented themſelves in an order the reverſe of what takes place in the ſolar rainbow;

becauſe in the latter caſe the ſpectator is ſituated between the rainbow and the ſun. Thus the ſmaller circle was terminated at its interior margin by the red colour, and at its exterior by the violet; whilſt the largeſt exhibited the red at its exterior, and the violet at its interior.

We were then in lat. 32° 42′ S. long. 7° E.

On the 7th of January we paſſed under the meridian of Paris, in 33° S. lat.

Having plunged the aërometer of Beaumé in the ſea-water, in order to determine its ſpecific gravity, it indicated 3° 4-5ths. I had obtained the ſame reſult from a ſimilar experiment which I made near the Equator. Hence it appears that the ſaltneſs of the ſea does not perceptibly vary in different parts of the ocean, though very diſtant from each other, and heated to very different degrees of temperature by the rays of the ſun.

On the 9th, we began to exerciſe the crews of both ſhips in ſhooting at a mark. A prize of ſmall value was the reward of thoſe who hit an object fixed to one of the fore-ſail booms. We were pleaſed to obſerve that moſt of our men took very good aim, though they had never been accuſtomed to the uſe of fire-arms. It was a matter of conſequence, in an expedition like ours, in the courſe of which we might ſometimes be under the neceſſity of defending ourſelves againſt the attempts of the ſavages, that every one of our company ſhould underſtand the uſe of ſuch arms as we had on board.

The captain of the Eſperance having ordered an half of a very fine tunny to be tied to a buoy and thrown into the water, as a preſent to our Commander; it did not float near enough to our veſſel to enable us to take it up, when one of the ſailors plunged into the ſea in order to ſwim after it, although it was known that a ſhark had been caught that very morning by the crew of the Eſperance, and the calmneſs of the weather afforded an additional ground of apprehenſion, leſt one of our beſt ſeamen might fall a prey to another of theſe animals.

Notwithſtanding we had already reached the thirty-third degree of ſouth lat., being in 5° E. long., the bonitos ſtill continued to follow us in as numerous ſhoals as ever; though they are ſeldom known to abound at ſo high a degree of latitude. The north winds were probably the occaſion of their leaving their uſual haunts.

I muſt do the crew of our ſhips the juſtice to remark, that if they were leſs ſkilled in fiſhing than the crew of the Eſperance, they alſo laboured under certain diſadvantages which the others did not. It was the buſineſs of the boatſwain to furniſh the ſailors with lines, which ours diſtributed throughout the whole expedition with ſo much parſimony, that the ſailors loſt all their inclination for this occupation. The inſpecting officer ought to have appriſed him of the pernicious conſequences reſulting from this miſtaken piece of economy; but he neglected to do it.

The animal known by the name of *meduſa velella,* was induced, by the tranquil ſtate of the ſea, to riſe to the ſurface of the water, where we obſerved large numbers of this ſpecies. They were preciſely ſimilar to thoſe which I have often met with in the Mediterranean, where the ſailors conſider them very delicious eating.

The ſucceſs of our expedition depended very much upon the ſhips being ſuch as did not water; we had, however, ſcarcely left the roads of Breſt, when we were obliged to pump the veſſels. As our ſhip made three-fourths of an inch water every hour, we were under the neceſſity of pumping it twice every day. This precaution was the more indiſpenſable, as the water had already attacked our ſalt proviſions, the preſervation of which was an object of the greateſt importance on a voyage like ours. Very fortunately, that which got into the hold did not penetrate far.

The ſpace between decks was ſo much lumbered, that it laſted ſeveral months before we could find out the ſpot where it leaked, which at laſt was diſcovered to be behind one of the knees. Upon lightening the veſſel, we found that one of the tree-nails had been forgotten, and the place where it ought to have been inſerted ſmeared over with tar. Having bolted it properly, we were enabled to keep the ſhip dry.

The albatroſſes of the Cape of Good Hope, which began to appear in large flocks, ſhewed us that we were approaching to the ſouthern extremity of Africa. We deſcried the land about eight o'clock in the morning of the 16th of January. Table Bay was then about 20,000 toiſes diſtant from us.

The currents, which had made us fall off ſo much from our courſe whilſt we were in the track of the regular winds, having fortunately taken an oppoſite direction where we met with the variable ones; what we had loſt to the weſt was very nearly made up to us by what we gained to the eaſt, as appeared when we made the land of the Cape of Good Hope. It is evident that the tendency of the ſeas to preſerve the level, ſome few irregularities proceeding from the variable winds excepted, ought to induce mariners, in the parts where theſe winds prevail, to bear down to the eaſt in proportion as the general winds determine the currents to the weſt.

We had another indication of our being near the land in the difference of colour of the water, ariſing from the ſhallowneſs of its bottom.

Some ſeals, of the ſpecies called by Linnæus *phoca puſilla,* approached very near to our veſſel in queſt of their food amongſt the large maſſes of *fucus pyriformis,* which floated upon the water. Theſe animals often eſcaped from our ſailors by taking ſeveral ſucceſſive leaps over the water. This they perform by placing their hinder paws together, ſo as to reſemble the broad tail of a fiſh, and act with conſiderable reſiſtance againſt the ſurface of the water, over which they bound like a nimble quadruped over a level plain.

We fell a little to leeward of the mouth of Table Bay, which gave us hopes of coming to anchor in the courſe of the day. It was not, however, the moſt favourable weather for making the land; for the day was very rainy, and the coaſt often concealed by a thick fog from our view.

About ſeven in the evening we were between 7 and 8,000 toiſes from the mountain of Hout Bay, which bore E. 3° 45′ N. The foreland of the Cape bore N. N. E. The Lion's-head E. 3° N. Our ſoundings gave us here the depth of water at ſeventy toiſes over a bottom of coral.

The ſea appeared very phoſphoreſcent throughout the whole night which we ſpent off the coaſt. A great number of luminous ſpecks were obſervable wherever the water was agitated. This phoſphoreſcence differed in no other reſpect from that uſually obſerved at ſea, than in its greater intenſity, proceeding from the ſuperabundance of phoſphoric globules. Such phoſphoric ſubſtances abound much more in the vicinity of the land, than in the open ſea at the ſame latitude; as I have remarked upon a former occaſion.

A ſlight S. E. breeze enabled us in the afternoon of the following day to direct our courſe towards the mouth of Table Bay. As ſoon as it blew a little freſher, we ſteered with full ſails towards the *Pointe des Pendus*, ranging very near to the coaſt, our depth according to the ſoundings being pretty uniformly about five toiſes.

About half an hour after five we caſt anchor in a bottom of muddy grey ſand, at the depth of about twenty-four feet, and diſtant 5,130 toiſes from the ſhore. The principal ſteeple in the town bore E. 38° S. The flag upon the Croupe de Lion E. 3° N. The flag at the northernmoſt ſide of the fort E. 48° N. The Iſland Robben N. 1° W.

We had not a ſingle ſick man on board, although the length of our paſſage had reduced us to a very ſcanty daily allowance of water; but we had endeavoured to compenſate for the want of it by a copious uſe of various antiſcorbutic remedies. A very wholeſome and pleaſant kind of punch, made of brandy, vinegar, ſugar and water, had been daily diſtributed amongſt our crew towards the latter end of the paſſage. The ſhips were fumigated every day, and we were very careful that the ſailors ſhould change their clothes whenever they had got wet. It was a ſatisfaction to us to find that theſe precautions had not been taken in vain.

CHAP. III.

Abode at the Cape of Good Hope—Depoſitions of two French Captains, ſhewing that they had been informed at Batavia by Commodore Hunter of his having ſeen ſome Perſons at the Admiralty Iſlands, dreſſed in the Uniforms of the French Marine—Captain Bligh's Voyage from England in Queſt of the Bread-fruit in the Society Iſlands—Violent Gales from the South Eaſt—Local Cauſe of their Violence—Slave-trade—Excurſions amongſt the Mountains in the Vicinity of the Town—Journey of the Fiſcal—Voyage to Franſche Hoek.

TWO officers of health came on board from the Cape Town, in order to learn whether any of our crew were infected with contagious diſorders. The ſmall-pox is the diſeaſe moſt dreaded by the inhabitants; for not being endemic, it occaſions here, as well as in every part of India, the moſt dreadful ravages, whenever it is imported amongſt them from foreign countries.

The maſter of a merchant veſſel from Bourdeaux, which had arrived here a few days before us, immediately came to acquaint us that the Commander of the naval forces at Iſle de France, having received ſome information relative to the fate of La Pérouſe, had diſpatched a frigate to the Cape, in order to communicate his intelligence to the Commander of the expedition ſent in ſearch of that unfortunate navigator. The frigate had ſailed from Iſle de France a few days before our arrival.

Our Commander Dentrecaſteaux diſpatched an officer to the Governor of the Cape to arrange the ceremonial of the ſalute. This officer received from the *Chargé d'Affaires* of France the diſpatches which Citizen Saint-Felix, Commander of our naval forces in the Indian ſeas, had ſent to Dentrecaſteaux by the frigate Atalante, Captain Bolle, which had immediately ſailed back for Iſle de France.

I ſhall here inſert the letter addreſſed to our Commander, with the depoſitions of two maſters of merchant veſſels, who were at Batavia during the ſtay which Commodore Hunter made at that place, upon his return from Botany Bay in a Dutch veſſel, after he had been ſhipwrecked off Norfolk iſland.

Letter from Citizen Saint-Felix, Commander of the Naval Forces of France in the Indian Seas, to General Dentrecaſteaux.

" I learn from private correſpondence that you do not purpoſe to touch at Iſle de France till on your return from the important expedition in which you are engaged. Diſappointed in the hope, with which I had flattered myſelf, of having the honour to converſe with you, I haſten to diſpatch, in order that they may find you at the Cape of Good Hope, two reports relative to the object of your miſſion, which I have lately received from the maſters of two French veſſels arrived here from Batavia. You will thereby be informed of the particulars, how a Dutch veſſel, having on board Commodore Hunter of the Sirius Engliſh frigate, together with his ſhip's company, diſcovered near the Admiralty Iſlands, in the South Sea, ſeveral perſons clothed in European manufactures, ſome of which, in particular, appeared to be French uniforms. You will alſo be informed that the Commodore did not doubt that theſe were remains of the ſhipwreck ſuffered by M. de la Pérouſe, whom he had often ſeen at Botany Bay.

" I conceived that the communication of theſe reports muſt intereſt you; and they appeared to me of ſo important a nature, that I reſolved to tranſmit them directly to you by a frigate, which I have diſpatched to the Cape for that expreſs purpoſe. Captain Bolle, who commands the veſſel, will leave the papers in the hands of our Chargé d'Affaires, in caſe he ſhould not meet you there; in order that they may be delivered to you immediately upon your arrival. Though I have received no official directions relative to your expedition, that authorize me to ſend this frigate upon its preſent deſtination, yet I have no doubt that the ſtep I have taken will meet with the approbation of his Majeſty, both when I conſider the intereſt of the public and the ſentiments of my own heart. It was reſerved for you to acquire a claim upon the gratitude of the whole French nation, by accepting the command of an expedition which confers equal honour upon the Sovereign who has ordered it, and the Commander to whom its execution is intruſted. In every part of the globe that you may viſit, you ſhall ever be attended by my fervent wiſhes for your ſucceſs, and the inviolable and perfect attachment with which I am, &c.

(Signed) SAINT-FELIX."

Iſle de France, 9th Nov. 1791.

Report delivered to Saint-Felix, Commander of the Naval Forces of the French Nation in the Indian Seas, by Captain Préaudet, Maſter of the Jaſon, from Batavia.

The Sirius Engliſh frigate, commanded by Commodore Hunter, and bound for New Holland, was caſt away off Norfolk Iſland in the South Sea, towards the end of the year 1790. The ſhip's company were taken on board a ſloop that accompanied the frigate, and carried to Botany Bay, where Commodore Philips engaged a ſmall Dutch veſſel to convey the ſhipwrecked crew, together with their commander, to England.

Having ſailed from Botany Bay in this veſſel, with an intent to touch at Batavia, they were carried by contrary winds and the force of the currents as far eaſtward as 167° E. long. meridian of Greenwich. Wiſhing to paſs through the Straits of St. George, they came within ſight of the Admiralty Iſlands, ſituated in 147° E. long. 3° 25′ S. lat. Near to the moſt eaſterly of theſe iſlands they obſerved ſeveral boats, amongſt the crews of which there were many perſons who wore European ſtuffs and pieces of cloth in their dreſs; they even diſtinguiſhed ſome who were clothed in the uniform of the French Marine. Theſe people hung out the white flag as a ſignal for the Engliſh to approach; but though Commodore Hunter was very deſirous of doing it, he found it impracticable, on account of the contrary currents and winds, and the danger to which the numerous ſhoals would have expoſed them.

Commodore Hunter had often ſeen M. de la Pérouſe at Botany Bay, and lived upon terms of intimacy with him. He had learnt from him that his intention was to paſs through the Straits of St. George, after leaving Botany Bay, and from thence to direct his courſe to the northward. He does not doubt that the Aſtrolabe and Bouſſole were caſt away upon the abovementioned iſlands, in conſequence of the calms and ſtrong currents that prevail in thoſe parts. He has informed me that he has been carried by them ſix hundred miles to the eaſtward in the ſpace of ten days; as he knew from repeated obſervations of the longitude, from the time-keepers, and from the bearings of the land. In a word, Commodore Hunter, whom I ſaw at Batavia in the courſe of my laſt voyage, appeared to me to be fully purſuaded that the Européan dreſſes, which he ſaw in the boats from the Admiralty Iſlands, were collected from the wrecks of the veſſels formerly under the command of La Pérouſe.

Commodore Hunter is at preſent upon his return home to England, from whence he will probably tranſmit a more circumſtantial account of this affair to France.

From his own experience in approaching the Admiralty Iſlands, the Engliſh Commander thinks that any veſſel intending to ſail thither ought to endeavour to get early into its latitude, in order to avoid being carried away by the currents, which ſet to the eaſt with prodigious ſtrength.

(Signed) PREAUDET, Maſter of the Jaſon.

Iſle de France, 6th Nov. 1791.

Report delivered by Pierre Magon Lépinay, Maſter of the Maria Helena, from Batavia, to Saint-Felix, Commander of the Naval Forces of France in the Indian Seas.

The commander and officers of the Sirius Engliſh frigate, after being ſhipwrecked off Norfolk Iſland, were carried to Botany Bay, from whence they ſailed in a ſmall Dutch veſſel for Batavia, where they arrived towards the latter end of September, in the preſent year, after a paſſage of about ſix months.

A day or two after they had weathered the Straits of St. George, they found themſelves as ſoon as it dawned within ſight of two of the Admiralty Iſlands, which were very near them; they immediately ſounded, but could not reach the bottom.

They afterwards obſerved two canoes that contained about twelve men each, rowing from the iſlands towards them; but though they would not come on board the veſſel, they however approached very near to it. There was then very little wind blowing. The veſſel was expoſed to a current which drove it off from the land: at any rate, the Dutch captain had no inclination to approach nearer to the ſhore. It was obſerved that two of the men in the canoes had ſword-belts ſimilar to thoſe worn by European officers; they made ſigns as if they wiſhed to have their beards ſhaved, and many of them had pieces of red and blue cloth about their dreſs, which proved that they had had ſome communication with Europeans. As Captain Hunter, Commander of the Sirius, had been informed at Botany Bay by La Pérouſe himſelf, that his intention was to paſs the Straits of St. George; all the officers of that frigate were of opinion that they had thus unexpectedly diſcovered the iſlands upon which he was caſt away.

I, the underwritten, certify that the above narrative is conformable to what I have collected from different converſations with the officers of the Sirius, who had arrived at Batavia after the ſhipwreck of that frigate, in a ſmall Dutch veſſel, with which I was in company during the month of October.

(Signed) MAGON LEPINAY.

Iſle de France, 31ſt Oct. 1791.

As Commodore Hunter was at the Cape of Good Hope, on his return from Batavia to England, at the moment when we arrived there; we had reaſon to expect that we ſhould receive from him every poſſible information concerning what he had ſeen at the Admiralty Iſlands; but were ſurprized to hear that he had ſailed from the Cape two hours after we had caſt anchor. He was probably well acquainted with the object of our expedition; for we were expected at the Cape, and our Commander's flag muſt have convinced him that theſe were the ſhips ſent in ſearch of La Pérouſe. It appeared very aſtoniſhing to us, that he had not attempted to convey to us even the ſcanty information which Préaudet and Magon Lépinay had collected from himſelf and his officers at Batavia. Our amazement was ſtill greater, when we underſtood that Commodore Hunter had not only not ſuffered any thing to tranſpire during his ſtay at the Cape, which could give ground to believe that he had ſeen ſavages dreſſed in the uniforms of the French marines, but that he had even expreſsly declared to ſeveral of the members of the regency, and in particular to his friend Mr. Gordon, that he knew nothing of the facts reported upon the arrival of the Atalante: neither was there any reaſon to ſuſpect that the reports left at the Cape, by Captain Bolle, came from Commodore Hunter himſelf.

Captain Bligh, Commander of the Engliſh ſloop Providence, which had been fitted out for the purpoſe of ſearching for the bread-fruit tree in the Society Iſlands, had caſt anchor in Table-bay ſhortly after the Atalante had ſailed from thence. It appeared that Captain Bligh had heard nothing from Commodore Hunter relative to the depoſitions of the two French captains; but, that upon the information communicated to him by perſons who had ſpoken with the captain of the Atalante, he had aſſured Colonel Gordon, that when he returned to the Society Iſlands, he would make what enquiries he was able in thoſe parts where La Pérouſe was reported to have been caſt away, and endeavour to ſave ſome of the remains of that unfortunate expedition.

This was the ſecond expedition which Captain Bligh had undertaken in queſt of the bread-fruit tree. In the courſe of the firſt voyage which he made for the purpoſe of procuring this valuable tree to the Weſt Indian ſettlements of the Engliſh, he had been ſet on ſhore in conſequence of a mutiny amongſt the crew, of which he publiſhed an account after his return to England.

We learnt that the Pandora Engliſh frigate, commanded by Captain Edwards, had ſince been at the Society Iſlands, where they had ſeized fourteen of the mutineers. Four of them afterwards made their eſcape when the veſſel was run aground off Norfolk Iſland. The ringleader of the mutineers, Chriſtian, who had been maſter of the veſſel under the command of Captain Bligh, had eſcaped with nine others to another iſland, and carried ſeveral of the natives with him. One of the officers of the Pandora lately arrived at the Cape, aſſured us that Bligh had behaved very ill to Chriſtian, and that an abuſe of authority on the ſide of the captain was the cauſe of all his ſubſequent misfortunes. Chriſtian, though maſter of the veſſel, had been maltreated, according to Captain Bligh's orders, as if he had been a common ſailor of the loweſt rank. If this be the fact, Captain Bligh diſguiſes the truth when he aſſerts, that he had always treated him with the greateſt liberality.

There were at that time eighteen ſhips lying at anchor at the Cape, of which twelve were Dutch, two French, two American, and two Engliſh.

At ſun-riſe we ſaluted the place with thirteen guns, which it returned with the ſame number.

18th. At nine o'clock the Commander of our expedition went on ſhore; upon which the town ſaluted him with fifteen guns, which we returned gun for gun. The Governor had ſent ſeveral carriages, and a large company of muſicians to attend General Dentrecaſteaux at the place where he landed. Accompanied by the muſicians, playing upon their inſtruments in a very boiſterous manner, he went with ſome of his officers to wait upon the members of the regency, who received him in a full aſſembly of the council, and ſoon after returned his viſit, at the houſe of the Chargé d'Affaires of France, where he lodged.

The greater part of our officers took lodgings in different houſes of the town. The Dutch inhabitants at the Cape are known to be very fond of lodging ſtrangers at their houſes. Their common price is a piaſtre a day. I took a lodging, together with ſome of my travelling companions, at the houſe of a M. de Lettre.

19th. The ſummit of the Table Mountain was hid in thick clouds, which at this ſeaſon of the year is a certain prognoſtic of high winds from the ſouth-eaſt, that generally continue for two or three days. The gales were this time ſo violent, that during the whole time they prevailed no veſſel of the ſize of a ſloop dare venture to approach the ſhore.

Though the clouds appeared immovably attached to the top of the mountain, even when the winds blew with their greateſt violence, they were, in fact, perpetually replaced by others; but the force with which they were driven along, after their ſeparation from the mountain, diminiſhing their coheſion, they were ſoon diſſipated in the atmoſphere. We often obſerved large maſſes of theſe clouds, which as ſoon as they were detached from the ſummit, immediately diſappeared.

Theſe violent gales from the ſouth-eaſt, which have often been noticed by travellers, appeared to me to proceed from the nature of the coaſt, which forms a very high ridge from the Cape Town as far as to the mouth of Falſe Bay, and acts as a barrier, preventing the ſouth-eaſt winds from paſſing beyond it. Whenever theſe winds get into Falſe Bay, it can only happen in conſequence of their having ſurmounted this obſtacle which oppoſes them at the ſouthern extremity of Africa. The dilatation of the lower column of air is ſo much impeded by the compreſſion which it ſuffers, in its aſcent towards the ſummit of this ridge, from the weight of the ſuperincumbent column, that, whenever it has paſſed theſe heights, the reaction of its elaſticity is proportionate to the diminution of the reſiſtance before oppoſed to its expanſion. Its impetuoſity is then ſuch as frequently to looſen ſhips lying in the road from their anchors, and ſet them adrift.

The violence of theſe winds is the greateſt where they deſcend along the declivity of theſe mountains: in the interior of the country ſituated at a ſmall diſtance to the eaſtward, on the contrary, they are very moderate; as I have had occaſion to remark in ſeveral excurſions which I made from the town.

The clouds, with which the ſummit of the ridge is at ſuch times covered, are naturally produced from the enormous maſs of air, which, after becoming ſurcharged with moiſture during its paſſage over a vaſt extent of ocean, when it aſcends into the higher regions of the atmoſphere, depoſits, in the form of clouds, the ſuperabundant water which, on account of the change of temperature, it can no longer retain in a ſtate of ſolution.

In the courſe of the night, the long boat of the Eſperance was torn by the gale from her ſtern, and loſt. To ſupply its place, a ſort of light veſſel uſed in the whale-fiſhery, was purchaſed of an American ſhip.

20th. Though the ſouth-eaſt wind continued to blow with great violence, I made an excurſion in the neighbourhood of the town, where I found, in great abundance, two ſpecies of the *chironia*, termed *C. trinervia* and *C. dendroides*. The *gorteria ciliaris* likewiſe grew at the foot of the mountains. The beautiful ſhrub, known by the name of *brunéa palacea*, adorned the riſing grounds. No inſects, of courſe, could be ſeen whilſt the winds blew with ſuch violence.

I took a view of the Company's garden, of which many travellers ſpeak in terms of enthuſiaſtic admiration. It is, nevertheleſs, nothing more than an immenſe incloſure, which contains ſome very fine oaks. Several ſquare plots of ground hedged round with myrtles, are planted with kitchen-vegetables; but very few curious plants are to be ſeen there. They alſo contain ſeveral of the orchard-trees of Europe. I obſerved ſome bananas, the leaves of which had been torn into ſlender ſtrips by the wind.

The *falco ſerpentarius* of Linnæus I ſaw very tame in a houſe belonging to the Governor.

The menagery ſituated, at the extremity of this garden, contained but a very ſmall number of uncommon animals, the chief of which were the oſtrich, the zebra, the porcupine, the jackall, and ſeveral birds; amongſt others, the bald-headed curlieu of Buffon, *(tentalus calvus*, Linn.)

The gales were leſs violent in the evening, and gave us hopes of fine weather.

A veſſel employed in the ſlave-trade lay at anchor in the road. It had lately arrived from Mozambique, and its cargo of four hundred negroes were, for the preſent, on ſhore. It was a moſt melancholy ſpectacle, to behold theſe miſerable wretches, the greater part of whom were already afflicted with the ſcurvy, after a very ſhort paſſage, crowded into three narrow rooms, from whence they were ſhortly to be carried on board, doomed to waſte their lives in ſupporting the luxury of ſome wealthy American. The ſhip had been trading with countries where dogs are in great requeſt; and theſe dealers in human lives did not ſcruple to avow that they often purchaſed two or three blacks for one handſome dog.

On the 22d, I ſpent the day in examining the Lion's Mountain. The ſoil of this mountain, which derives its name from the appearance which it preſents when ſeen at a diſtance by ſea, is very unfavourable to vegetation. It is almoſt every where covered, even as far as the ſea-ſide, with hard ſteatites of a greyiſh colour, and ſo barren that I carried home with me but very few ſpecimens of plants. On the following day I viſited the Devil's Mountain. It well deſerves its appellation, on account of the violence of the ſouth-eaſt winds, which is much greater at the declivity of this mountain, than in any other part of the country. The delightful vale, which ſeparates this mountain from the Lion's Mountain, is adorned with the beautiful ſpecies of the *protea*, named by Linn. *protea argentea*, the tufted tops of which reſiſt the violent blaſts of wind from the ſurrounding mountains. The leaves of this tree are covered with a ſort of down, which grows the thickeſt on the parts moſt expoſed to the wind. This circumſtance may here be remarked in moſt of the plants liable to be beaten by the winds, which renders it probable, that their down ſerves them as a defence from the injury they might otherwiſe receive from them.

The fertility of this valley afforded a remarkable contraſt with the barrenneſs of the Lion's Mountain. The vegetable kingdom appeared here in its higheſt luxuriance. Where the grounds roſe with an eaſy aſcent, they were beſpangled with the tulip of the Cape of Good Hope *(hæmanthus coccinea,* Linn.); a variety of different kinds of ſhrubs projected from the cleft between the rocks, and at their baſes grew the beautiful *ſtœbe gnaphaloides,* amongſt an abundance of other plants.

24th. As the preparation of the plants, which I had collected on the preceding day, occupied a great portion of my time, I had not leiſure to undertake any long excurſion; I therefore confined myſelf to ſhort walks in the neighbourhood of the town.

The falſe aloë, termed by botaniſts *agave vivipara,* was then in full flower. I admired the lightneſs with which the black titmouſe *(parus ater,* Linn.) hovered about this plant, whilſt it fed upon the ſaccharine liquor which exudes from the baſes of its *corollæ.* It was with regret that I killed ſome of theſe beautiful little birds, in order to carry off their ſpoils.

Three of us, who were walking together, followed a narrow path till within a ſmall diſtance of the country-houſe of the Fiſcal: his name was Deneſs. This man, habituated to deſpotic authority over his inferiors, wanted to hinder us from walking over ſome uncultivated grounds, which, as he told us with great emphaſis, were his property. We were not a little aſtoniſhed at

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this prohibition, uttered in ſo dictatorial a tone; for the Fiſcal ſeemed fully perſuaded that we durſt not be ſo raſh as to proceed any farther. We, however, after having repreſented to him that we could not poſſibly do any harm to his uncultivated ſtony grounds, purſued our route. The petty Vizier fell into a violent rage at ſeeing how little we minded his orders, and not being able to anſwer our remonſtrances, he told us in very bad French, that ſuch were his commands, and it required no further explanation.

Two negroes, who had accompanied us from the town, trembled at the ſound of the Fiſcal's voice, and it was with difficulty that we could perſuade them to remain with us: for they told us, whilſt they ſhuddered with horror, that this Monſieur Deneſs was the perſon who preſided at the whippings that were adminiſtered according to the orders of the officers of police.

It is a remarkable circumſtance that the Fiſcal is here inveſted with the charge of inſpection over all the ſervants of the Company, and holds his office independently of any other perſon. It ſeems ſtill more ſtrange that ſo important a truſt ſhould be committed to the hands of an officer of police, who is thus enabled to practiſe all the extortions for which his office affords him ſuch ample opportunities; for he it is who both fixes the amount of fines, and collects their produce. In conſequence of this regulation, pecuniary puniſhments are the only ones inflicted upon thoſe who are able to pay: the reſt he always orders to be whipped.

25th. I employed this day in taking a view of the Table Mountain, which derives its appellation from the horizontal plain which its ſummit preſents when ſeen at a diſtance.

I had frequently to croſs a brook that flows down this mountain. The large ſtones, rounded by friction, that are found on its ſhore, ſhew that in the rainy ſeaſon the water deſcends in torrents.

About half way up the mountain I found the *theſium ſtrictum.* A little higher up I met with the magnificent umbelliferous plant, called by botaniſts *hermas depauperata,* the beautiful fern, *acroſtichum pectinatum*; the *bubon galbanum,* the *reſtio ſimplex,* &c.

That portion of the mountain which I had hitherto aſcended, was compoſed of greyiſh freeſtone, very hard, and covered with maſſes of a fine white-coloured quartz, which ſerved as a baſis to ſeveral very cloſe ſtrata of micaceous ſchiſtus.

Having aſcended upwards of 350 toiſes perpendicular height, I arrived at a fiſſure in the ſide of the mountain, which, when ſeen from the town, does not appear to afford a paſſage to the ſummit;

mit; but I found the diſtant view had deceived me, for I diſcovered a path in it of no very difficult acceſs to perſons uſed to climbing mountains, being the track moſtly frequented in order to arrive at the top, which is hardly to be ſurmounted by any other.

Though the part of the mountain where we now ſtood is about 500 toiſes perpendicular height, the heat of the atmoſphere raiſed the thermometer to twenty degrees in the ſhade.

Fuel is very ſcarce at the Cape of Good Hope; but though the mildneſs of the climate exempts the inhabitants from the neceſſity of employing artificial heat as a defence againſt the ſeverity of the weather, they want it, however, for the purpoſes of cookery, and ſend their ſlaves even far beyond the Table Mountain, to fetch the ſmall ſupply of wood which they require. We met ſeveral blacks carrying to the town their bundles of fuel, which conſiſted of the branches of different ſorts of ſhrubs: amongſt others I diſtinguiſhed *cunonia capenſis,* and ſeveral beautiful ſpecies of the *protea.* I was much gratified at having an opportunity to ſee theſe fine plants, and regretted only that they had been gathered for no other purpoſe than to ſerve as fuel. I picked out ſome ſpecimens for myſelf, and the blacks, whoſe burthens were not become much lighter for what I had taken away, proceeded on their journey to the town. It gave us pain to obſerve that theſe miſerable beings were obliged to march forward, without ever halting; though the ſteep deſcent of the mountain muſt have been extremely fatiguing.

The mountains in the neighbourhood of the town ſerve as a place of refuge for ſlaves, whom the barbarous treatment they endure compels to attempt their eſcape. Driven by hunger they then frequently approach, under cover of the night, to habitations, in order to procure by theft their ſcanty means of ſubſiſtence. That they prefer ſuch a miſerable ſtate of exiſtence to remaining with their maſters, proves how inhuman the treatment muſt be to which they are expoſed. It muſt be very dangerous to truſt one's ſelf, alone and unarmed, amongſt the clefts of the rocks, where theſe wretches, driven by deſpair, ſhut themſelves from the ſight of the ſun, in order to eſcape from ſlavery.

Some drops of water, that ooze at this height from fiſſures between the beds of micaceous ſchiſtus, afford the traveller means of quenching his thirſt.

The high borders of the cleft, through which we were aſcending, were ornamented with various beautiful ſpecies of lilacs: we obſerved particularly the *antholiza ethiopica*, remarkable for the brilliant appearance of its ſcarlet bloſſoms.

Having arrived at the ſummit of the mountain, we were beginning to regale ourſelves upon the proviſions which we had brought with us, when we obſerved ſome of the company of the Eſperance coming towards us, who had undertaken the ſame tour without providing themſelves with any refreſhments for their journey; and we were heartily willing to let them ſhare in our frugal repaſt.

The rain diſcharged by the clouds which had been detained over the ſummit of the Table Mountain during ſeveral of the preceding days, had formed pools in the clefts of the rock, between which I found a great variety of curious plants.

The ſummit of the mountain preſents a view of Falſe Bay in its whole extent, and I carefully followed it with my eye in all its windings. We deſcended by the ſame track that we had aſcended. It was already dark when I arrived in the town, loaded with an abundant collection of plants.

26th. As ſoon as I had made the preparations requiſite for preſerving the ſpecimens which I had collected, I directed my obſervations to the eaſtern part of the country.

Beyond the farther end of the bay there is a vaſt plain of ſand, on which one is ſurpriſed to ſee a prodigious number of plants vegetating. The moſt frequent are various ſpecies of the *dioſma*, *polygala*, and *borbonia*. Theſe plants, however, would not be able to ſupport themſelves in ſo barren a ſoil, if they did not ſhoot their roots to a great depth into the ground, ſo as there to imbibe the moiſture neceſſary for their vegetation.

I had to croſs ſeveral brooks, which take their riſe from the neighbouring mountains, and ſome of which are loſt in the ſands before they diſcharge themſelves into the ſea. In theſe moiſt ſituations I found the beautiful ſhrub, *genthyllis ſpiralis.*

The fiſſures in the ſand ſerve as places of ſhelter for the ſnakes, which one frequently finds ſleeping upon their borders; but as ſoon as one approaches them they immediately fly to their lurking-places for refuge.

27th. I reſolved to make a ſecond viſit to the Table Mountain. I went a little off from the common path, and enriched my collection with ſeveral plants which I had not ſeen before. Indeed it required a conſiderable length of time to exhauſt all the botanical ſtores of a country which produces ſuch an abundance of vegetables.

A thick fog ſuddenly ſpread itſelf over the part of the mountain where I ſtood, and obliged me immediately to deſcend. I ſhould certainly have loſt my way, had I not happened to be quite near to the path that leads to the foot of the mountain. Although there blew but little wind at that time upon the Table Mountain, the clouds, after paſſing over its ſummit, precipitated themſelves in the form of miſts, in the ſame manner as when they are impelled by the ſouth-eaſt gales.

28th. I enriched my collection with a number of plants which I gathered in the vicinity of the town.

I had hitherto obſerved but very few inſects, as they do not generally frequent places ſo much expoſed to currents of the air.

On the 29th, I made an excurſion on the oppoſite ſide of the Table Mountain, following the courſe of the valley which divides it from the Lion's Mountain.

The *cyanella capenſis* grew quite cloſe to the edge of the ſea.

Having reached the heights, I had the pleaſure to ſee the ſides of the rocks ornamented with different ſpecies of ſhrubs, amongſt which the *erica halicacaba* particularly diſtinguiſhed itſelf, by the oval form, and beautiful tints of its flowers.

The *diſa grandiflora,* one of the moſt beautiful plants of the claſs of *orchis,* grew upon the ſide of the ſmall ſtreams that wind themſelves among theſe mountains.

This excurſion proved the more gratifying to me, as I made it in the company of M. Maſſon, who had acquired a very extenſive acquaintance with botany, in the courſe of his travels.

The following days were employed by me in making new reſearches in the places I had already viſited. Vegetation is here ſo varied, that I continually met with new objects of attention.

An Engliſh frigate, from Tellicherry, had been lying for five days at anchor at the Cape, on its return to England to give an account of an engagement that had taken place between the French frigate La Reſolue, of twelve guns, Captain Calaman, and the Engliſh frigate Phenix, of eighteen. The Engliſh frigate had attempted to make prizes of ſome veſſels under the convoy of La Reſolue.

The Engliſh, according to their uſual cuſtom, attempted to ſpread reports injurious to the character of Captain Calaman, who, according to the accounts we received from Iſle de France, had conducted himſelf with equal courage and generoſity. The Engliſh Commander would have done well to have contradicted theſe reports, by giving a juſt ſtatement of the facts; but it ſeemed it was his intereſt to diſguiſe them: for it is an unheard-of thing for that nation to make an attempt upon veſſels eſcorted by a ſhip carrying the flag of ours.

Another Engliſh veſſel, La Couronne, which arrived the day after the frigate had come to anchor, obſerved the ſame conduct.

I ought to remark, that our Commander having ſent an officer on board each of theſe veſſels, to comply with a cuſtomary piece of etiquette, the Engliſh Captains were not polite enough to return the compliment.

I had already provided myſelf with ſpecimens of moſt of the curious plants that were to be found in the neighbourhood of the Cape Town; and could not expect to encreaſe my collection, without making an excurſion into ſome of the more diſtant parts of the country. I had for ſeveral days entertained a wiſh to viſit the chain of mountains, called by the Dutch Franſche-Hoek, ſituated at a much greater diſtance eaſtward of the town than their appearance might lead one to ſuppoſe them. Their aſpect gave me reaſon to hope that I ſhould find them abounding with vegetable productions.

February 9. The gardener to our expedition made one of the party. We had hired a Hottentot to lead the horſe that carried our baggage; and a young negro, who hardly knew three words of the French language, ſerved as our interpreter.

As a paſſport was neceſſary, M. Berg, one of the moſt amiable and intelligent men of the Company, provided us with one.

Colonel Gordon, Commander of the troops at the Cape, had furniſhed me with letters of recommendation to ſeveral of the coloniſts.

This gentleman is the celebrated traveller, who communicated to Buffon the firſt authentic accounts he received concerning the Giraffe, an animal till then very little known. Colonel Gordon had penetrated as far as 21° S. lat. into the interior parts of Africa, with a view to making diſcoveries in natural hiſtory. He has often aſſured me, that at this diſtance, more than twelve degrees north of the Cape, his barometrical obſervations ſhewed him, that the ſurface of this country was more than a hundred toiſes above the level of the ſea; though, in traverſing it, he had not been ſenſible of any riſing of the ground, but had thought he travelled over a plain that was very little elevated. Theſe obſervations, which he repeated at different times, after intervals of ſeveral days, ſeem to demonſtrate that the ſurface of this country riſes, in a gradual aſcent, to a height equal to that of the moſt elevated mountains in the other parts of the globe.

I leave it to natural philoſophers to determine, whether or not the ſinking of the mercury in the barometer proceeded from another cauſe than that which produces the ſame effect, when this inſtrument is carried upon high mountains.

We met a number of chariots drawn by three or four pairs of oxen. They were returning empty to the town, each of them conducted by a Hottentot, who ſtood erect in the carriage, and directed his team with wonderful dexterity, by means of a long whip, which he held in his hand. Though the foremoſt pair of oxen were at a great diſtance from him, he never miſſed any one of them that wanted the laſh.

Our Hottentot marched on with his pipe in his mouth, and regaling himſelf from time to time with the Hottentot's fig *(meſembrianthemum edule)*, which grew among the ſands on the road ſide, without ſeeming to think of the horſe entruſted to his care; ſo that our baggage fell off ſeveral times, and would have been left on the road, if we had not appriſed our ſmoker of it, who was walking on without taking any notice of the accident. We found it neceſſary to uſe threats in order to rouſe him from his lethargy, and render him more attentive to his charge.

Several ſpecies of the *geranium, polygala, lobelia, &c.* grew upon the ſandy plain through which we travelled.

Having arrived at ſome ſandy grounds, we ſaw ſeveral gazelles, but they kept at ſo great a diſtance from us that we were not able to ſhoot any of them.

Two hours after dark, we arrived at the houſe of M. Boſman, at Bottelary. The letter of recommendation, which Mr. Gordon had given us, procured us a very friendly reception from this worthy planter, whom we found ſitting at ſupper in the midſt of his numerous family. He immediately invited us to ſit down with him, and ſet before us ſome very agreeable ſtrong-bodied wine, made from the grapes that grow about Bottelary. Some merchants of the town ſell this wine at a very high price, as Conſtantia wine, to which however it is inferior in quality; and M. Boſman told us that it may be bought twelve times cheaper than the other.

M. Boſman, in his inſulated ſituation upon a ſmall ſpot of fertile ground, ſurrounded by a large deſart of ſand, was, of courſe, very deſirous of hearing our news; but we found it very difficult to communicate any to him, as our negro interpreter appeared now much leſs fit for his office, than we had before conceived him to be. After having ſpent a great deal of time with ſaying very little, we went to take our repoſe, of which we ſtood in great need. We all envied the peaceable life which this reſpectable planter leads, in the midſt of a family where the greateſt ſimplicity of manners is united with the moſt engaging politeneſs.

10th. As ſoon as it was day, we went to take a view of the grounds about this delightful habitation. We found in M. Boſman's garden moſt of the kitchen-plants and fruits of Europe; fine plantations of almond-trees roſe before the front of the houſe, which was ſurrounded on all ſides with vineyards that conſtitute the chief wealth of the owner.

Soon after ſun-riſe, M. Boſman's youngeſt daughters, ſeeing that we were collecting inſects, came to offer us their aſſiſtance. They hunted them through the garden with incredible ſwiftneſs; and ſoon brought us a fine collection of ſuch as they thought the prettieſt.

As we were ſhortly to ſail from the Cape, we had not much time left us for our expedition to Franſche Hoek. We therefore took leave of this amiable family, with the moſt ſenſible regret, and proceeded on our journey.

We arrived in good time at Stellenboſch, where we ſtopped at the houſe of M. Hoffman.

The manner in which we were received at Stellenboſch afforded a ſtriking contraſt with the frankneſs and cordiality of our reception at Botelary. This was a very pleaſant village; but we found that we were not to expect every where that agreeable frankneſs of manners, which characteriſes the planters of the Cape. We had imagined that a letter of recommendation from Colonel Gordon, addreſſed to M. Hoffman, would be ſufficient to introduce us: but it was not till after he had carefully examined our paſſport, that he invited us to remain at his houſe. There are no public inns at Stellenboſch, no more than at the Cape Town; but the Dutch inhabitants of the town accommodate ſtrangers at a ſettled price, which indemnifies the landlord. We were lodged at M. Hoffman's very nearly upon the ſame footing as at the Cape.

On the following day I viſited the hills in the neighbourhood of Stellenboſch.

The beautiful tree called *brabeium ſtellulifolium*, remarkable for its fruit, which reſembles in ſhape that of the almond-tree, grew here upon the banks of a rivulet that runs through the village.

I enriched my collection with ſeveral kinds of *orchis*, and with the ſpecies of the *protea*, called *mellifera*, *pallens* and *ſpecioſa*; beſides a number of other plants.

On the 12th we proceeded on our way, intending to arrive towards evening at Franſche Hoek.

This place, which, as is implied by its name, is partly inhabited by French, ſerved as an aſylum for the proteſtant families, which in conſequence of the perſecutions they ſuffered on account of their religious opinions, croſſed the ocean, in the year 1675, with a view of eſtabliſhing themſelves in this part of Africa, where they were well received by the Governor, Simon Vander Stel, and provided with every requiſite for following the employments of huſbandry.

The wind from the ſouth-eaſt blew with force ſufficient to incommode us on our march. It was, however, by no means ſo violent here, as we learnt upon our arrival that it had been at the Cape. The great difference in the force of theſe gales depends, undoubtedly, upon local cauſes, as I have endeavoured to ſhew upon a former occaſion.

It was on this day that the pinnace of the Eſperance, commanded by Citizen le Grand, not being able to reach the ſhip, was obliged to run for ſhelter off the iſland of Robben.

We had to walk two hours after it was dark, before we arrived at Franſche Hoek, where we preſented ourſelves at the houſe of Gabriel Deprat, to whom I had a letter of recommendation.

As he was abſent, Jacob de Villiers, one of his neighbours, invited us to remain at his houſe, where we met with a very friendly reception.

The names of theſe planters led us to hope that we were now amongſt people with whom we could converſe in our own language; but theſe Frenchmen by extraction, having been obliged to make uſe of the Dutch for ſo long a ſpace of time, retained nothing of their mother-tongue beſides their family names.

It will not be unintereſting to the reader to know the names of thoſe French families that ſtill ſurvived in the midſt of theſe mountains. They were the following:

Lombart, Faure, Rotif, Blignant, Dupleſſis, Marée, Ponté, Naudé, Cronier, Hugo, de Villiers, Marais, du Buiſſon, le Roux, Deprat, Rouſſeaux, Villiers, Terrons, Hubert.

We were here in a pleaſant valley, where the rays of the ſun, reflected from the ſurrounding mountains, ſoon ripen the grape, which is the chief ſource of wealth to the inhabitants. A good deal of cheeſe is alſo made here.

We employed the two following days in climbing up the mountains in this neighbourhood. I here collected ſpecimens of the *protea ſlorida* and *ſerraria*, amongſt a great variety of other plants.

Theſe mountains are compoſed chiefly of granite, and a very hard ſort of free-ſtone. The mould produced by the decay of the vegetables grow upon them, is the cauſe of the fertility of the vallies where the coloniſts reſide. Hence they are obliged to travel over ſandy deſarts in order to carry the produce of their labour to the town. This kind of ſituation is common to all the eſtabliſhments at any conſiderable diſtance from the Cape. The cultivators are neceſſitated to go more than 500,000 toiſes into the interior of Africa, in order to ſeek out ſome ſpots of arable land, ſcattered like iſlands in an ocean of ſand; and after they have found them, every one applies to the ground he has cleared whatever mode of cultivation he thinks moſt adapted to the ſoil. The black ſlaves, though obliged to labour very hard, are in general treated with humanity. It is remarkable that, contrary to the practice of the Spaniards, who always endeavour to make proſelytes of their ſlaves, the Dutch planters leave theirs in the moſt profound ignorance of their religion.

We frequently ſaw the ſnakes, which are much dreaded by the inhabitants of the country, lying in wait under the trees for the birds which often become their prey.

The zebras are very common in theſe mountains:

tains: they run away with prodigious ſwiftneſs upon the approach of a man.

The ape termed *magot* by Buffon (*ſimia innuus*, Linn.), ſometimes came very near to the houſe where we lodged. I once witneſſed a ſingular fact, which ſhews what authority theſe animals poſſeſs over their young. A large ape that was followed by a very little one, thinking himſelf unobſerved, took it up in one of his paws and beat it for a conſiderable ſpace of time with the other. If the apes knew how to proportion the puniſhment to the offence, the cub muſt have been very naughty; for he got a moſt ſevere beating.

The olive-coloured thruſh, and the ſtarling of the Cape of Good Hope, with ſome wood-peckers, &c. were the birds I moſt frequently ſaw during this excurſion.

As our departure from the Cape was fixed to take place very ſoon, we were obliged to leave Franche Hoek much ſooner than we could have wiſhed. We were in ſuch haſte to return to the town, that we bade adieu to our worthy hoſt Jacob de Villiers, at ten o'clock in the evening, and immediately ſet out on our journey. We marched the whole night through, and at length arrived at the ſame hour of the following evening in the town, having travelled by way of the Paarl-Berg and Paarde-Berg. Such a forced march could not fail to prove extremely fatiguing to us, who had for ſeveral days paſt enjoyed but a very few hours ſleep. One of the ſervants belonging to the Eſperance, Emard Serpoy, who had wiſhed to accompany us, as he was paſſionately fond of ſhooting, was ſo overtaken with drowſineſs about midnight, that we were obliged to let him ſleep for half an hour upon the road, before he was able to proceed any farther with us.

I was ſorry to learn, at my return from Franche Hoek, that we were to loſe three of our travelling companions, namely, the aſtronomer Bertrand, the naturaliſt Blavier, and the painter Ely, who had requeſted the Commander to leave them on ſhore, as their health did not allow them to accompany us farther on our expedition. Bertrand having aſcended the Table mountain a few days before, in order to make ſome barometrical obſervations, had fallen in ſuch a manner as to be very ſeverely hurt. I was informed at my return to France, that he was not ſo fortunate as to ſee his country once more, having died at the Cape, a ſhort time after our departure.

As all the houſes in the Cape Town are built with flat roofs, it preſents a very agreeable view. The fortifications on the ſide facing the ſea had been rendered ſtronger, a few years ago, by additional ramparts.

The Commander perſuaded me, as the veſſels were already ſo much lumbered, to leave the collections of natural hiſtory, which I had made during our ſtay at the Cape, in the hands of Gui, agent of the French government. This perſon promiſed to ſend them to France by the firſt opportunity. They, however, never arrived there, and I was informed at the Iſle de France, upon my return from the South Sea, that they had been ſeen by the naturaliſts Macé and Aubert Petit Thouars, depoſited in a granary belonging to this agent, long after our departure from the Cape; though he had had plenty of opportunities to ſend them to France, if his deſign had been to fulfil his engagement.

Few ſpots of the globe ſo well deſerve the attention of a commercial nation, as the Cape of Good Hope. Its ſituation has rendered it as an anchoring ſtation almoſt indiſpenſably neceſſary for ſhips ſailing to the Eaſt Indies. It affords abundance of proviſions; but the reſtrictive regulations daily diminiſh the number of ſhips frequenting this harbour, as they now endeavour to reach the place of their deſtination without touching at the Cape; and ſome put into the harbour at St. Helena, where they are able to proviſion themſelves at an eaſier rate.

The ſpirit of ſpeculation that prevails amongſt the Dutch Company, has often induced them to feign a great ſcarcity of proviſions at the Cape, in order to enhance their price. The cultivators are not permitted to enter into a direct bargain with ſtrangers for the produce of their lands; but are obliged to leave them to be diſpoſed of by the Company, who frequently purchaſe them at a price four times leſs than that which they themſelves receive.

The vexatious interference of the ſuperior agents in the concerns of their ſubordinate officers, turns likewiſe to the diſadvantage of ſtrangers, who find it impoſſible to eſcape from the rapacity of ſo many perſons, all combined againſt their intereſt. This avaricious ſpirit gradually undermines the proſperity of this country, as it renders navigators unwilling to touch at the Cape whenever they can avoid it. A ruinous propenſity to extravagance, which has for ſome years paſt prevailed amongſt the women, has produced a great change in the manners of the inhabitants, who are now eagerly intent upon adopting all the faſhions of Europe.

All theſe evils have ariſen from the Dutch government having ſo groſsly miſtaken its own intereſt, as to leave a place of the laſt importance to the navigation of India, under the direction of a company of private merchants. But it is known, that the political views of this people generally act in ſubordination to the deſire of gain, which governs them, and is often in contradiction with their intereſts as a nation.

It was then expected that commiſſaries were to be ſent from Europe, in order to put affairs upon a better footing: but ſuch commiſſaries have been ſent ſeveral times, and the affairs ſtill remained in their former condition.

We laid in a ſufficient ſtock of proviſions at the Cape to ſupply the place of what we had already conſumed. It would have been well if as much of our European ſtock as was bad in its quality had been changed for better. The contractors had deceived us in the quality of the wine which we bought of them. We had paid them double the ordinary price, that we might have it of the beſt quality, and ſuch as would keep for a long time. Part of it, however, was already ſpoiled before we reached the Cape. When we arrived there, it was a matter of the utmoſt importance to have it changed, and the more ſo, as we knew we could not do it in the ſubſequent part of our voyage. We might there have had our choice between the wine of the country and Bourdeaux wine, as a veſſel at anchor in the road had a cargo of the latter on board. Why it was neglected, I am at a loſs to comprehend. The conſequence was, that our bad wine grew worſe and worſe, till we were at length obliged to ſubſtitute brandy in its place. This piece of negligence deprived us of one of the beſt means for preſerving the health of the crew during a voyage, in the courſe of which they ran the hazard of being in want of every neceſſary.

The obſervations taken on board the Recherche, gave us for its anchoring ſtation at the Cape of Good Hope, 33° 54′ 24″ S. lat. 16° 4′ 25″ E. longitude.

The variation of the magnetic needle at the ſame place was 24° 30′ W.

Our aſtronomer Bertrand found, for the place of his obſervatory in the town, 33° 55′ 22″ 4-5ths S. lat. 16° 3′ 45″ E. long.

The variation of the magnetic needle, as obſerved by him, was 24° 31′ 52″ W. The dip of a flat needle gave 47° 25′.

During the whole time we lay at anchor, the mercury in the thermometer was never higher than 25° above 0.

CHAP.

CHAP. IV.

Departure from the Cape of Good Hope.—Death of the Maſter-Carpenter of the Recherche.—Divers Occurrences.—Singular Flight of the Albatroſs.—The Iſle of St. Paul ſeen.—Conflagration of its Foreſts—Prodigious Swarms of Inſects in our Ship's Biſcuit—Violent Effects of the Surge—The Commander dangerouſly wounded—Luminous Points at the Extremity of the Conductors—Large phoſphoreſcent Corpuſcles——In Conſequence of an erroneous Obſervation taken by Willaumez, we enter by Miſtake into Tempeſt Bay inſtead of Adventure Bay—General Obſervations upon the Variations of the Magnetic Needle—Gradual Diminution of the Phoſphoreſcency of the Water, proportionate to our Diſtance from the Land—Courſe of the Currents—We are obliged to heat the Place where our Time-keepers are kept—Anchorage in Port Dentrecaſteaux.

16th FEBRUARY.

WE waited only for a favourable wind to quit our ſtation at the the Cape, when a ſouth-eaſt breeze ſpringing up about ten o'clock in the forenoon, enabled us to get under way. Scarcely had we ſpread our ſails, when a ſudden ſquall from the mountains blew with ſuch violence, that it prevented us for ſome time from making uſe of our rudder, ſo that we were in danger of running foul of ſome of the ſhips which lay at anchor in the road. However, we ſoon run paſt them, and ſtood for the offing.

18th. About eight in the morning our maſter-carpenter, Louis Gargan, died, a victim to the exceſſes in which he had indulged during our ſtay at the Cape. A fever, which appeared ſlight in its commencement, grew afterwards ſo violent as to put an end to his life. We felt the loſs of this man the more ſenſibly, as the carpenter of a ſhip is one of the moſt uſeful perſons on board, eſpecially in a voyage undertaken for the purpoſe of diſcovery in the midſt of ſeas full of rocks and ſhoals, where one is in perpetual danger of being ſhipwrecked, and where, if one does not poſſeſs the means of conſtructing another veſſel to receive the crew, all hopes of reviſiting one's native country muſt go with the wreck to the bottom.

Two perſons had concealed themſelves in the ſhip before our departure from the Cape, and did not make their appearance upon deck till we were ſo far from the land that it was no more practicable to put them on ſhore. They were, of courſe, permitted to accompany us. The one was a ſoldier, deſerted from the garriſon at the Cape; the other a German, a very ſkilful workman in mathematical inſtruments, who had practiſed his trade for nine years in England. The Engliſh, he told us, were going to ſend him to Botany-bay, amongſt a great number of other convicts. He aſſured us, that he had been condemned to be ſent thither for debt. Having ſeized an opportunity of eſcaping from the veſſel where he was confined, he fled for refuge to the mountains in the neighbourhood of the Cape-Town. We had no uſe for the talents of this artiſt in the line of his profeſſion; we therefore firſt employed him as our armourer, and afterwards as a ſmith. The armourer of our ſhip had been left on ſhore at the Cape, on account of ſickneſs.

On the 20th of February we weathered Needle Point, at the diſtance of about 100 toiſes, with winds from S. W. and W.

On the 22d we were in 35° lat. S. long. 20° E. when the ſoundings gave us our depth at 62 fathoms, over a bottom of grey calcareous ſand.

The currents had hitherto ſet to the N. W. but on the 25th they drove us towards S. W. as we were now off the channel of Mozambique, where the current, at this ſeaſon of the year, takes a S. W. direction along the coaſt of Natal, which we had in ſight.

On the 26th the ſurge ran ſo high, that a windmill, which we had faſtened very ſtrongly to the poop, was carried away by the billows. As our veſſel was much too heavily laden, we thought ourſelves indemnified for the loſs, by getting rid of a burden of eleven hundred weight. I do not know how it happened that we were burthened with ſuch an almoſt uſeleſs machine, ſince whereever we were able to procure wheat, we could likewiſe procure flour. At any rate, a hand-mill ſix times lighter, would have been leſs cumberſome, and would have anſwered our purpoſe better.

The rolling of the veſſel was ſo violent, that our time-keepers ſtruck againſt the ſides of their boxes, which ought to have been made rather more ſpacious.

We ſtill ſaw a great number of flying fiſh, though we had already paſſed the 35° of S. latitude.

The quarter-galleries of both veſſels were built much too low, particularly conſidering they drew ſo deep. We had reaſon to apprehend that they might be carried away by the ſurge, if it ſhould long continue to run ſo high: thoſe of the lower deck of the Eſperance were already conſiderably damaged.

29th. At this ſeaſon of the year, veſſels that approach near to the mouth of the channel of

Mozambique, generally meet with violent ſtorms. The gradual fall of the mercury in the barometer to the amount of eight lines, whilſt the north-eaſt winds blew from this gulph, gave us a preſage of a ſtill more violent hurricane. The clouds contained ſuch a ſuperabundance of electric matter, that though our conductors helped to draw off a portion of it, the lightning frequently ſtruck into the water at the diſtance of a few yards from our veſſel. A gale from the eaſt, which brought back fair weather, was preceded by a riſe of two lines in the mercury of the barometer. On the 1ſt of March, the ſea was ſwelled to ſuch a height by this gale, that we often loſt ſight of our conſort behind the billows. This veſſel, ſeen at the diſtance of two or three hundred toiſes, preſented a magnificent ſpectacle; ſometimes it appeared buried in the waves; again it emerged, and mounted to the very ſummit of the ſurge, ſhewing a great part of its keel above the water.

3d. As the ſwell abated, we knew that we had ſailed beyond the mouth of the channel of Mozambique; for, although the wind continued to blow with nearly the ſame violence as on the preceding days, the ſea, being ſheltered by the coaſts of Madagaſcar, became very tranquil. We ſaw a prodigious quantity of the *fucus pyriformis*, the largeſt ſpecies of that genus, floating upon the ſurface of the water: they had undoubtedly been detached from the rocks that bound the coaſt of that large iſland. This fucus, which is ſeveral yards in length, is provided with ſmall bladders filled with air at the extremities of its higheſt leaves, whereby it is enabled in its growth to take a direction towards the ſurface of the water.

About five o'clock in the evening we were ſurrounded by a great number of whales, which came within a hundred yards of our ſhip. The Anglo-Americans, who ſometimes viſit theſe ſeas in order to fiſh for the whales, are more than indemnified for the expences of their equipment by the profits from the oil which they carry home.

The depoſitions of the Captains Magon Lépinay and Préaudet, had determined our Commander to endeavour to reach the Admiralty Iſlands as ſoon as poſſible, thinking that, after paſſing along the north coaſt of New Holland, we ſhould be able to arrive there before the return of the eaſtern monſoon. We had, however, made as yet but very little way, being, on the 6th of March, only in 44° E. lon. The apprehenſion of being detained at the Molucca Iſlands during the whole time of the eaſt monſoon, which was expected to ſet in during the month of March, induced him to relinquiſh his former intention, and reſolve to double the Cape of Van Diemen, in order to get into the South Seas.

About half an hour after ſix o'clock in the morning, he ſent a boat to the Eſperance to acquaint the Captain with his determination. The wind fell all of a ſudden when the two ſhips were very cloſe to each other. A very high ſurge increaſed the danger of our ſituation; ſo that the bowſprit of the Eſperance was very near running foul of our ſtern, had the veſſels not been kept clear of each other by the boats.

We found that the currents ſet to the north. The ring by which the long-boat, that had been ſent to take an obſervation of their direction, was faſtened to the cable, gave way as they were hoiſting it on board, and the compaſs that they had been uſing was deſtroyed.

Though we were upwards of 1,000,000 toiſes from the Cape of Good Hope, we ſaw ſeveral albatroſſes (*diomedea exulans*), ſome of which let us come very near them, as they floated upon the ſurface of the ſea. We frequently obſerved them thruſt their beaks very deep under the water to ſeize their prey.

The flight of theſe birds is very aſtoniſhing. One cannot perceive any motion of their wings except at the moment they raiſe themſelves into the air; when they frequently uſe their feet alſo, which, being webbed, ſerve them to make ſeveral ſtrokes againſt the water, in order to raiſe themſelves out of it. This impulſion being once given, they have no more occaſion to ſtrike their wings together, but hold them very widely expanded, whilſt they ſail along, balancing their bodies alternately from right to left, and ſkimming ſwiftly over the ſurface of the ſea in queſt of their food. This mode of poiſing themſelves in the air undoubtedly ſerves to accelerate their flight, but one can hardly ſuppoſe it to be ſufficient for ſupporting them above the ſurface. Perhaps ſome imperceptible tremulous motion of their feathers may be the principal cauſe of their extraordinary mode of flying. If that be the caſe, they muſt be provided with ſome particular muſcles adapted for the purpoſe; on which account I think that the ſtructure of the albatroſs deſerves to be very attentively inveſtigated by anatomiſts.

The *puffins* of Buffon *(procellaria puffinus)*, were very numerous in theſe ſeas. The flight of this bird is performed in a manner analogous to that of the albatroſs, for he often ſkims along for a great length of time without any perceptible motion of his wings: it is only when he changes his oblique poſition from one ſide to the other that one may obſerve him ſtrike the air with the lowermoſt wing, by which his body is immediately inclined in the oppoſite direction.

We were ſteering our courſe S. E. E. in order to paſs between the iſlands of St. Paul and Amſterdam; but the wind having ſhifted to S. E. we were obliged to tack S. S. W.

7th. About nine o'clock in the evening, as we were in lat. 34° 45′ S. and long. 44° 5′ E. the wind ſmelt very ſtrong of ſea-water. Had we been ſailing in parts leſs known than theſe, we ſhould have had reaſon to apprehend that we were very near to ſome iſland. It is probable that the ſmell proceeded from a quantity of fucus detached from the ſouth coaſt of Madagaſcar, and carried a great way into the ſea by the currents.

One of our ſailors, in a fit of drunkenneſs, threw himſelf into the ſea. As the weather happened very fortunately to be calm he was taken up and put on board; but this immerſion only increaſed his drunkenneſs, and he would have thrown himſelf again into the water if he had not been held faſt.

We continued for twelve days with ſlight breezes that ſhifted from S. S. W. to N. N. W. veering round by E. to direct our courſe, as near as poſſible, ſo as to paſs between the iſlands of

Amſterdam and St. Paul. Though this courſe was the ſhorteſt, with reſpect to diſtance, that we could have taken in order to arrive at the channel through which we intended to ſail, the want of wind detained us much longer than might have been the caſe had we ſteered in another direction. By ſailing more directly ſouthward, we ſhould ſoon have met with winds that would have carried us in a ſhort time to the Cape of Van Diemen.

It was not before the 28th of March, when we were in lat. 37½° S. that the N. N. W. wind began to blow pretty freſh. A great flight of gulls and mews ſhowed us that we were near land; as theſe birds never fly to any great diſtance from the ſhore. We at length came in ſight of it about half after one in the afternoon. It was the iſland of St. Paul, which bore S. E. at the diſtance of about 20,000 toiſes. This iſland was diſcovered in 1696 by Captain Valming, and called by him the Iſle of Amſterdam, whilſt he gave the name of the Iſle of St. Paul to the moſt ſouthern of the two. Captain Cook, whom I have herein followed, reverſed theſe appellations, and gave the name of Iſle of Amſterdam to the ſouthernmoſt, and that of Iſle of St. Paul to the other.

The Iſle of St. Paul preſented itſelf, at a diſtance,

tance, as if covered with thick clouds, above which the tops of the mountains were viſible. In four hours time we were near enough to perceive that theſe clouds aroſe from the iſland itſelf, from whence a thick ſmoke aſcended, which almoſt entirely covered it, eſpecially towards the north. We obſerved flames in different places, and ſoon perceived that the foreſts were on fire: the courſe of the flames and ſmoke, which appeared ſucceſſively in different parts of the country, pointed out to us the progreſs of the conflagration. We ſteered our courſe ſo as to paſs as near as poſſible to windward of the iſland. The ſame ſpecies of birds that we had obſerved a few hours before we eſpied land were flying about the rocks where they had their neſts. A great number of ſeals ſwam amongſt large maſſes of fucus that had been detached from the iſland, along the ſouthern coaſt of which we ranged at the diſtance of about 250 toiſes from the ſhore. This coaſt is very ſteep and perfectly ſafe: the ſurges, which followed its direction, would have apprized us of our danger in approaching it if there had been any ſhoals. The mountains on the ſouth-eaſt ſide of the iſland deſcend with very ſteep declivities as far as the edges of the ſea, and appeared to me to conſiſt of layers of free-ſtone, inclined from north to ſouth ſo as to form an angle of fifty degrees with the horizon. Farther to the ſouth I obſerved horizontal layers of the ſame kind of ſtone, from whence a ſmall rivulet diſcharged itſelf, in a caſcade, into the ſea. The rocks facing the ſea were ſhaped into a variety of thoſe groteſque figures, commonly termed *luſus naturæ.* We obſerved a light ſmoke aſcending in puffs from a ſmall ſubterraneous cavern at a little diſtance from the ſhore; though we could not learn whether the foreſts had caught fire from ſome conflagration in the bowels of the earth, or had been kindled intentionally by the inhabitants. I was informed at Iſle de France, upon my return from the South Seas, that an American veſſel had left ſome men at the iſlands of Amſterdam and St. Paul, for the purpoſe of collecting oil from the fat of ſeals, which are very numerous on thoſe coaſts. But though we watched very attentively to ſee if any ſignal was made for our aſſiſtance, we obſerved no ſigns of the iſland's being inhabited. At any rate it would have been impoſſible to put in there, as we could not have found an anchoring-place except to leeward of the iſland, where we ran the riſk of being ſuffocated by the ſmoke. The ſmell of the ſmoke ſeemed to ſhow that it proceeded entirely from the combuſtion of vegetables.

The mountains gradually diminiſh in height towards the ſouth-eaſt end of the iſland; ſo that, in favourable weather, veſſels might eaſily put in at that part of the coaſt. We obſerved ſeveral rivulets, which, after winding with a ſerpentine courſe amongſt the hills, diſcharged themſelves into the ſea.

We were ſtill very near to the iſland when the night came on. The land then appeared as if covered with a ſheet of fire, whilſt the illuminated ſmoke gave that vivid appearance to the ſky which generally portends a hurricane.

The iſle of St. Paul is about 10,000 toiſes in circumference, and ſituated in about 37° 56′ S. lat. and 75° 2′ E. lon.

The variation of the magnetic needle was here 17½° W.

During the continuance of the gales from N.W. and S. W. the mercury of the barometer gradually fell eight lines. On the firſt of April, it was ſtationary at 27 inches 7 lines, when the gale was ſo ſtrong, that we went at the rate of ten knots with the fore and main top-ſails ſet. We never ran ſo faſt as on this day, in the whole courſe of our voyage. We were now already in 40½° S. lat. Lon. 85° E.

Hitherto we had flattered ourſelves that no fraud had been practiſed upon us, at leaſt with reſpect to the quality of our ſea-biſcuit. But we diſcovered, when it was too late, that a part of it had already made a voyage before; for, at the end of five months after our departure from Breſt, it ſwarmed with prodigious numbers of thoſe maggots, that are afterwards changed into the ſpecies of fly known by the name of *dermeſtes paniceus*. Theſe inſects ſoon became very troubleſome to us: in the night-time they burnt themſelves at our lamps in ſuch numbers, as very frequently to extinguiſh them. From the biſcuits the maggots ſoon ſpread themſelves throughout all the reſt of our proviſions, and it laſted a conſiderable time before we could conquer the diſguſt which it at firſt gave us, when we ſaw them ſwarming in all our food.

2d. The impetuoſity and frequency of the ſqualls obliged us to make a great many tacks. They once forgot to ſhiver the main top-ſail before they brailed it up, and it was inſtantly torn in pieces.

On the 4th of April, being in 41° S. lat. 92° E. lon. we ſaw a great number of birds; amongſt others, gulls and the *larus marinus*, which ſeldom fly far from the land. Probably we were near to ſome rock or iſland. Though we had made a very good run, we ſtill ſaw the ſame kinds of birds on the following day. The land where they have their abode may poſſibly be diſcovered, when theſe ſeas ſhall be more frequented by navigators.

14th. A fall of the mercury in the barometer from 28 inches 3 lines, to 27 inches 7 lines, announced the approach of violent gales, which blew from W. and S. W. and raiſed the billows ſo high that they frequently daſhed over our decks. One of them, that had entangled our mizen chains, broke againſt the ſtern of the veſſel with ſuch force, that the ſailors thought we had ſtruck upon a rock. The ſhock was tremendous, and ſome of the ſtore-rooms inſtantly leaked.

The violence of the ſhock had thrown the Commander againſt one of the corners of a barrel-organ, intended as a preſent to ſome ſavage chief. The ſurgeon thought at firſt that he had fractured one of his falſe ribs; and the pain was ſo great, that, whenever he ſneezed, it threw him into a fainting fit. However, he ſoon recovered his health.

During the night the atmoſphere was filled with a ſuperabundance of electric matter: a part was drawn off by means of our conductors, upon the top of which we obſerved a luminous ſpeck, that vaniſhed and re-appeared ſeveral times in ſucceſſion. The ſea appeared more phoſphoric than uſual.

In the courſe of the night a large wave daſhed over the deck of our veſſel, having made its way through the opening between the fore-caſtle and quarter-deck, where we kept our boats. When I ſprang out of my bed, I found the cabin filled with water, and imagined we were going to the bottom. It kept us a long time employed before we could rid the ſhip of the water it had taken in. Three or four ſuch waves would infallibly have ſunk us. We ſhould not have ran ſuch a hazard, if we had been provided with means to lay gratings over the large opening by which the wave entered.

On the 17th of April, when we were in lat. 43° S. long. 129° E. the variation of the magnetic needle was 0.

The Eſperance was appriſed, that in caſe of ſeparation, our rendezvous at Van Diemen's Cape was to be the Bay of Adventure, inſtead of the Baie des Huitres.

We lay to under our fore-ſail during the night of the 20th, as our day's work had brought us ſo near the coaſt, that we could not carry full ſail. At nine in the evening, we ſounded, without ſtriking ground, with a line of ſeventy-five fathoms. We brought up with the lead a great quantity of phoſphoric ſubſtances, from about three to ſeven inches in circumference. As the compreſſibility of water has been demonſtrated, we know the principal cauſe of theſe ſubſtances being ſuſpended at different depths below the ſurface of the water, in proportion to their ſpecific gravity.

21ſt. As ſoon as it was day we directed our courſe, with full ſails, E. N. E.

About half an hour after nine o'clock, we obſerved a rock with a very ſharp point, known by the name of the Mew-Stone. Some other rocks and mountains of moderate height appeared to the eaſtward. The coaſt was indented with ſeveral ſmall bights in the land ; ſome pretty high mountains were ſeen at a ſmall diſtance from the ſhore, and we could diſtinguiſh the large trees which covered their ſummits.

We ſoon bore in with a bay open to the ſouth-eaſt. An iſland was viſible to the eaſtward, and nearer us we perceived breakers to N. E.

It was the Commander's intention to caſt anchor in Adventure-bay. As his wound did not yet permit him to leave his cabin, he was obliged to give his orders reſpecting our route, according to obſervations which were reported to him as they were taken. An erroneous obſervation, taken by Citizen Willaumez, * having been reported to

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* When we made the land of the Cape of Van Diemen, Willaumez was directed to take the neceſſary obſervations.

On

him, he gave orders to manœuvre the ſhips, ſo as to enter the bay ſituated on our left. In vain we looked for the Pinguin's Iſland, thinking ourſelves in Adventure-bay, though it really was Tempeſt-bay, named thus by Taſman, who, having entered it in the month of November 1642, was in the moſt imminent danger of being driven aſhore by a S. E. wind, when he endeavoured to get into the main ſea.

As we had got very far into the bight of the bay, our ſoundings gave us a depth of from fifteen to twenty-five fathoms, over a bottom of ſhells. The Commander was on the point of giving orders to leave the bay, that we might paſs the night in the open ſea: however, he reſolved to diſpatch two boats, the one to the northward and the other to the ſouth-eaſt, in order to look out for ſome place of ſhelter for our ſhips.

The men in the boat ſent to the north ſide of the bay, found a place of anchorage, with a very good bottom, where we might eaſily procure wood and water. They had ſeen ſome remains of huts, and near them large heaps of ſhells, that appeared to have been broiled by the natives.

On being aſked the bearing of Eddy-Stone, he ſaid it bore S. 19° W. though it actually bore S. 19° E. Accordingly the Commander gave orders to make the bay on our left, as he could not doubt that it was Adventure-bay.

It was, however, too late for us to put into this anchorage before night. As the weather was fair, it was reſolved to caſt anchor in Tempeſt-bay, in a bottom of grey ſand, at the depth of ten fathoms. We had been ſixty-four days on our paſſage from the Cape to this place. Moſt of the navigators who have made it before us, have performed it in fifty or at moſt fifty-five days. It is to be obſerved, that they have generally ſteered ſouthward as ſoon as poſſible, in order to get into the track of the weſterly winds. This route is ſomewhat longer than that which we took, but at ſea it is not always by taking the ſhorteſt road that one arrives the ſooneſt at one's place of deſtination. Navigators ought to be well acquainted with the ordinary courſes of the winds, that they may be able to get into thoſe which are the moſt favourable. The night continued very fine, though the air was charged with a great deal of moiſture. We were ſheltered from the N. W. and W. N. W. winds, though we now and then experienced a few ſlight blaſts.

We caught a great quantity of fiſhes with our lines. They were of a great variety of different kinds: the moſt numerous were thoſe of the ſpecies *gadus*.

The variation of the magnetic needle, obſerved when we paſſed under the meridian of Iſle de

France, at the diſtance of more than 700,000 toiſes ſouth, had been greater by twelve degrees than we found it near the coaſt of that iſland—a great difference when conſidered as ariſing merely from change of latitude.

The greateſt W. variation obſerved, was on the 3d of March. It was then 30½°, our lat. being 34° 30′ S. and long. 37° 45′ E. From that time it continued to decreaſe, till it became 0, in lat. 43° S. long. 129° E.; after which it paſſed to E. and continued to increaſe in proportion as we advanced eaſtward.

The W. variation of the magnetic needle, as obſerved till the period when it was the greateſt, had been more influenced by change of longitude than of latitude; though from that time, till we were under the meridian of Iſle de France, it appeared to depend much more upon change of latitude; for, from the point at which it had been the greateſt, till we paſſed under the meridian of Iſle de France, having changed our longitude by 17 degrees, and our latitude by 2½, the variation had been only 4°, though, by a change of latitude to 17 degrees further ſouth, the variation had been found 12° more than at Iſle de France.

The phoſporeſcence of the ſea, during this paſſage, had diminiſhed in an inverſe proportion to our diſtance from the land; ſo that a conſiderable time before we ſaw the iſland of St. Paul, one could hardly perceive any appearance of phoſphoreſcence in the waves.

During our paſſage from the Cape, the thermometer had never indicated lower than 8° below 0, nor higher than 20° above 0. The mercury in the barometer, during the ſame period, had never ſtood higher than 28 inches 7 lines, nor lower than 27 inches 7 lines.

While we were in the track of the variable winds, the currents had ſet from 10′ to 20′ N.; but whilſt we were ſailing off the S. W. coaſt of New Holland, they had ſet eaſtward. Theſe differences in their direction depend upon the ſituation of the lands.

Our tables for rectifying the irregularities of our time-keepers ariſing from difference of temperature, extended no farther than 15° of Reaumur's ſcale, and the balance-bow for our pendulum-clock was only calculated to anſwer between 105° and 115°. The latter was conſtantly above 115°, and the temperature of the atmoſphere was very often lower than 15° of the thermometer. It was neceſſary to keep up a degree of temperature, at leaſt equal to this, in the place where our time-keepers were depoſited. A common lamp might have anſwered this purpoſe; but we preferred one of D'Argand's, in order to avoid the ſmoke.

22d. The boats that had been diſpatched the preceding day for that purpoſe, were again ſent to ſound at the entrance of the ſtation where we intended to caſt anchor, as they had not had time ſufficient to do it the evening before. About half an hour after nine we received the agreeable intelligence, that it was a very well ſheltered harbour, with ſafe anchorage in a bottom of muddy ſand, not leſs than 3½ fathoms in depth at the entrance facing the middle of the bay. Their ſoundings had given them from 2½ to 4 fathoms throughout a conſiderable part of the harbour, which extends land-inwards about 2,500 toiſes. It was a better ſtation in every reſpect than Adventure-bay, and we could here ſupply ourſelves with wood and water as eaſily as we could wiſh.

Though the breeze was againſt us, it was at firſt ſo inconſiderable that we could be towed towards the harbour; but we had ſcarcely proceeded 500 toiſes, when it blew freſher and obliged us to caſt an anchor. The Eſperance, however, continued to be towed, and nearly reached the entrance of the harbour before it grew dark.

A boat which we ſent out to fiſh, took ſo many at a ſingle draught of the net, that the diſtribution was immediately made, and every one contented with his portion.

We were much ſurpriſed to find amongſt the fiſh caught with the line in the courſe of the night, ſome ſharks about a fathom in length. They were of the ſpecies *ſqualus cinereus.* This kind of ſhark never riſes from the bottom of the water. We never ſaw it approach the ſurface during the whole time of our ſtay at the Cape of Van Diemen. It does not appear to be dangerous to man; for our ſailors, though they bathed here very frequently, never met with any accident. It finds ſufficient food on theſe coaſts to ſatisfy its voracity without attacking men: otherwiſe the natives of the country, who frequently dive to a great depth into the ſea in queſt of ſhell-fiſh, would be in perpetual danger of being devoured by theſe animals.

Some mountains, which appeared to be above 500 toiſes in perpendicular height, were viſible towards the north at a diſtance of about 15,000 toiſes. Their ſummits were covered with tall trees, whoſe verdure gave additional beauty to the magnificent proſpect which they exhibited.

An officer belonging to our veſſel, who had been ſent to take the ſoundings at the farther end of the harbour, went on ſhore, where he found ſeveral huts, and near them the remains of broiled ſhell-fiſh, which had evidently ſerved for food to the natives.

25th. As we had hardly any wind, we weighed anchor a few hours before day-light, in order to be towed into the harbour. As the calm continued, this proved the moſt expeditious method, and we were ſoon brought into our anchoring place. We ranged at a ſmall diſtance from a rock ſituated about the middle of the entrance, leaving it to our left. Our ſoundings indicated a depth of 2½ to 3½ fathoms; in other parts of the ſame ſtrait it was from 4½ to 11½.

About eight o'clock, we caſt anchor in a depth of three fathoms, 350 toiſes from the entrance of the harbour, to which we gave the name of Port Dentrecaſteaux. The neareſt ſhore was at the diſtance of about 250 toiſes to the eaſtward.

It is difficult to expreſs the ſenſations we felt, at finding ourſelves at length ſheltered in this ſolitary harbour at the extremity of the globe, after having been ſo long driven to and fro in the ocean by the violence of the ſtorms.

The boats afterwards towed in the Eſperance, which caſt anchor about one o'clock in the afternoon, at a diſtance of 150 toiſes ſouthward of the Recherche. At firſt we had attempted to approach nearer to the ſhore without taking the ſoundings accurately; but we ſoon found ourſelves ſurrounded by the ooze, and were obliged to heave in at the capſtern in order to extricate ourſelves.

CHAP. V.

Abode at Port Dentrecaſteaux—Signs of the Coaſt's being frequented by the Savages—Different Excurſions into the interior Part of the Country—Trees of an enormous Height—Excellence of the Soil—Black Swans—Large Trunks of Trees, hollowed by Fire, ſerve the Natives as Places of Retreat—Kangourou—Obſervations relating to Comparative Anatomy—Places of Shelter againſt the Wind conſtructed by the Natives—Conſtruction of their Huts—A ſudden Guſt of Wind breaks our Chain—We run aground in the Mud—Meet with a young Savage—Intelligence of a Paſſage by which one may ſail from Tempeſt into Adventure-bay—Huts of the Natives—Phoca Monachus—The Heart of this amphibious Animal has no Foramen Ovale—Obſervations relating to Comparative Anatomy—Traces of Beaſts of Prey at the Cape of Van Diemen—Huts, which appear to have been lately inhabited—Viviparous Flies, the Larvæ of which produce ſpeedy Putrefaction in Fleſh-meat—Citizen Riche finds ſome burnt *human Bones—Our Maſter Sail-maker loſes himſelf in the Woods—Both Veſſels run aground in the Mud—Utenſils of the Savages—Place of the Obſervatory—Variation of the Magnetic Needle—Time of High-water in the Harbour—Departure from Port Dentrecaſteaux—Paſſage through the Straits of Dentrecaſteaux—Fires—Savages ſeen on the Shore—One of them kindles the Fire in different Places—We caſt Anchor in a large Bay at the Entrance of the Straits of Dentrecaſteaux—Excurſion into the Country—Savages found dreſſing their Food at the Fire—The Straits which we had diſcovered receive the Name of the Straits of Dentrecaſteaux—Anchoring Places in this Channel—Excurſions into the Countries ſituated along its Coaſts—Rencounters with the Savages—Departure from the Straits of Dentrecaſteaux.*

PORT Dentrecaſteaux is ſituated at the fartheſt end of Tempeſt-bay, and forms an almoſt oval baſin, extending about 2,500 toiſes in length towards N. N. E. Its greateſt breadth is about 760 toiſes. The tall foreſts that ſurrounded us on all ſides, and the mountains at no great diſtance from the coaſt, which ſheltered more than one half of the circumference of the harbour, added to the ſecurity of our anchorage. Though the gales were never ſo high, our pinnaces could ſail about it with ſecurity. A muddy bottom, about 3½ fathoms in depth, let them run no hazard if they were driven aground. More than 100 veſſels of the line might ride here with ſafety, and be ſupplied with as much wood and water as they ſtood in need of.

Towards the N. N. E. extremity of the harbour a ſmall river diſcharges itſelf into the ſea. Some of our boats attempted to row up the ſtream, but were prevented by the large trees that lay acroſs it. A few wild dogs were obſerved in the neighbouring country; and ſome ſheltering places, ſlightly conſtructed of the barks of trees, ſhewed that the ſhores were frequented by the natives. A piece of alga marina, of the ſpecies known by the name of *fucus palmatus*, was picked up. It was cut into the ſhape of a purſe, and appeared to have been uſed as a drinking veſſel, being found filled with water.

The weſt ſide of the harbour is the moſt favourable for taking in a ſupply of water. We took in ours on the W. S. W. and our wood on the oppoſite ſhore.

A fire that was ſeen at the diſtance of about 5000 toiſes to the South, informed us that we were near the habitations of the ſavages, although we had as yet ſeen none of them.

In the afternoon I went on ſhore, accompanied by the gardener and two others of our ſhip's company, in order to make an excurſion into the country towards N. E. We were filled with admiration at the ſight of theſe ancient foreſts, in which the ſound of the axe had never been heard. The eye was aſtoniſhed in contemplating the prodigious ſize of theſe trees, amongſt which there were ſome myrtles more than 25 fathoms in height, whoſe tufted ſummits were crowned with an ever verdant foliage: others, looſened by age from their roots, were ſupported by the neighbouring trees, whilſt, as they gradually decayed, they were incorporated piece after piece with the parent-earth. The moſt luxuriant vigour of vegetation is here contraſted with its final diſſolution, and preſents to the mind a ſtriking picture of the operations of nature, who, left to herſelf, never deſtroys but that ſhe may again create.

The trees in this foreſt did not grow ſo cloſe together as to prevent us from penetrating into it. We walked for a long time over ground, where the water, impeded in its courſe, has formed itſelf into marſhes, the borders of which we examined. Deeper within the foreſt, we found ſmall rivulets that contained very good water. Almoſt every where the ſoil conſiſted of a very fine mould, produced by the decay of vegetables, over a bed of reddiſh, and ſometimes greyiſh ſand. In ſome places it conſiſted of an argillaceous kind of earth, which imbibing the water with great facility, forms itſelf into bogs; in others this earth has been waſhed away by the water filtrating through the ground, ſo as to form pools, and ſometimes deep holes, the ſurface of which being covered with plants, one does not eaſily apprehend any danger in approaching them, but by the inadvertency of a ſingle moment may fall into them unawares. An accident of this kind happened to the ſurgeon of the Eſperance, who, whilſt he was a-hunting, ſet his foot upon what he took to be firm ground, and fell into a very deep bog. He immediately diſappeared; but fortunately he was able to ſwim.

We found ſome rudiments of huts in theſe woods, conſiſting of a frame-work made of the branches of young trees, and deſigned to be afterwards filled up with pieces of the bark, which the natives always uſe to cover the outſide of their cabins.

I gathered ſeveral ſpecies of the *eucalyptus*, during this excurſion; amongſt others, that which White has denominated *eucalyptus reſinifera*. This is a very tall tree, the ſpungy bark of which is often three inches in thickneſs, and ſeparates very eaſily from the trunk. It produces a gum reſin, of a reddiſh colour and aſtringent taſte, which is uſed for medicinal purpoſes. We likewiſe collected ſeveral ſpecies of *philadelphus*, the *bankſia integrifolia*, a new ſpecies of *epacris*, &c.

On the ſea-ſhore we met the ſervant of Citizen Riche, greatly delighted with having ſhot a few birds, which he was carrying to his maſter. This man, who had but juſt recovered from a fit of illneſs, was ſtill upon the liſt of the ſurgeon of the Eſperance, who thought he had a right to what his patient had ſhot; but neither the threat of being purged, nor even that of being put upon ſpare diet could make him give up a ſingle bird. The ſurgeon too kept his word; for he made him ſwallow a purgative and put him upon a ſpare regimen. The ſervant, having learnt by melancholy experience the conſequences of diſobeying the Doctor, always ran away as faſt as he was able, whenever he eſpied him in any of his ſhooting excurſions afterwards.

After having directed our route for ſome time to the north-eaſtward, we arrived before night at the coaſt directly oppoſite to our veſſels. We expected to be immediately taken on board, as we had been promiſed that a boat ſhould be ſent to fetch us, as ſoon as we wanted one. This might have been done in five minutes; but we were obliged to wait two hours on the ſhore. It would have been a very proper regulation, if a boat had been kept expreſsly for the uſe of thoſe gentlemen of the expedition who were appointed to make reſearches into natural hiſtory.

A bird that was ſhot upon one of the lakes, ſurpriſed us very much by the ſingularity of its plumage. It was a new ſpecies of the ſwan, of the ſame beautiful form, but rather larger than ours. Its colour was a ſhining black, as ſtriking in its appearance as the clear white of ours. In each of its wings it had ſix large white feathers; a character, which I have uniformly remarked in ſeveral others that were afterwards killed. The upper mandibule was of a red colour, with a tranſverſe white ſtreak near the extremity. The male had at the baſe of it an excreſcence conſiſting of two protuberances, that were ſcarcely obſervable in the female. The lower mandibule is red at the edges and white in the middle. The feet are of a dark grey. (See Plate IX.)

24th. It was ten o'clock of the next morning, before I could finiſh my deſcription and preparation of the ſpecimens I had collected the preceding day. I then went to examine the country ſituated to the eaſtward of our anchoring ſtation. It frequently happened that after having penetrated into the woods to the diſtance of 500 toiſes, at moſt, from the ſhore, I was obliged to return towards the coaſt on account of the difficulties that obſtructed my paſſage, which was not only impeded by the underwood, but often rendered impracticable by the ſtems of large trees thrown down by the wind. The direction in which they lay upon the ground, which was generally from ſouth-weſt to north-eaſt, proves that they were torn from their roots by violent ſouth-weſt winds. As theſe trees ſhoot out their roots in an almoſt horizontal direction, they are eaſily torn from the ground by the force of the wind, and frequently carry with them a great quantity of earth, which at a diſtance appears like a wall raiſed by the hands of men.

The fineſt trees in this country are the different ſpecies of *eucalyptus*. Their ordinary thickneſs is about eighteen feet: I have meaſured ſome that were twenty-five in circumference. The ſpongy bark of the *eucalyptus reſinifera*, becoming ſlippery in conſequence of the moiſture that conſtantly prevails in the heart of theſe thick foreſts, renders it ſtill more difficult to penetrate into them. This bark very readily peels off into pieces that have a great degree of flexibility, and are uſed by the natives for covering their huts. They often find long ſtripes of it about a foot in breadth, which ſpontaneouſly ſhell themſelves off from the lower part of the trunk. They might eaſily peel it off in pieces of twenty-five or thirty feet in length.

Moſt of the large trees near the edges of the ſea have been hollowed near their roots by means of fire. The cavities are generally directed towards the north-eaſt, ſo as to ſerve as places of ſhelter againſt the ſouth-weſt winds, which appear to be the moſt predominant and violent in theſe parts. It cannot be doubted that theſe cavities are the work of men; for had they been produced by any accidental cauſe, ſuch as the underwood taking fire, the flames muſt have encompaſſed the whole circumference of the tree. They ſeem to be places of ſhelter for the natives whilſt they eat their meals. We found in ſome of them the remains of the ſhell-fiſh on which they feed, and frequently the cinders of the fires at which they had dreſſed their victuals. The ſavages, however, are not very ſafe in theſe hollow trees; for the trunk being weakened by the excavation, may eaſily be thrown down by a violent guſt of wind; neither are their ſeats very commodious, as the ground is very uneven, and we obſerved no contrivances to render it more level. Anderſon ſpeaks of hearths of clay, made by the natives in theſe hollow trees. Whenever I have found any clay in them, it did not appear to me to have been placed there by the ſavages; but one frequently meets with it piled up between the roots in conſequence of natural cauſes. At any rate, the natives of this country, as we ſhall ſee hereafter, do not make their fires upon hearths, but kindle them on the bare ground, and prepare their victuals over the coals.

Some of the largeſt trees were hollowed by the fire throughout the whole length of their trunks, ſo as to form a ſort of chimnies: nevertheleſs they continued to vegetate.

Many of the large trunks that we felled during our ſtay at this place, were found, notwithſtanding their apparent ſoundneſs externally, to be rotten at the heart.

After having followed the ſhore that extends with numerous windings, towards the ſouth-eaſt, we attempted to make our way acroſs ſome marſhes, in order to get into grounds that had acquired a more ſolid conſiſtence from the roots of the plants; but a ſpecies of the *ſclerya,* which grows to the height of ſix or eight feet, cut our hands and faces, with its leaves, in ſuch a manner that we were obliged to deſiſt from our attempt.

During this excurſion I killed ſeveral birds of the genus *motacilla*, and ſome parrots, amongſt which was the parrot of New Caledonia, deſcribed by Latham.

We now directed our route towards the entrance of the harbour, where tents had been pitched for the purpoſe of taking obſervations, as we were ſure of meeting there with a boat to carry us on board.

The aſtronomers expected the firſt of Jupiter's ſatellites to appear at about a quarter of an hour after eight in the evening; but with all their activity they could not get their inſtruments ready in due time; ſo that the opportunity was loſt. Bonvouloir, one of our officers, who had made the preliminary calculations a long time ſince, was ſo affected by this diſappointment, that he wept like a child.

One of our crew ſhot a young kangarou upon the ſhore. The animal, after running about a hundred yards along the ſand, threw himſelf into the ſea and expired. It was remarkable that he uſed all his four feet in running, not ſupporting himſelf ſolely upon the hinder feet, as he is uſually repreſented to do; though theſe as well as the fore, are without hair on the inner ſide. As he goes in queſt of his food more in the night-time than during the day, nature has provided him with the membrane termed by zoologiſts *membrana nictitans*, ſituated at the interior angle of the eye, which he can extend at pleaſure over the whole ball. His ſtomach was full of vegetables, and divided by three very diſtinct partitions, which ſeem to approach him to the claſs of the ruminant quadrupeds. His teſticles were on the outſide of the abdomen. Theſe animals probably find a part of their food on the ſea-coaſt, as we frequently obſerved the prints of their feet in the ſand.

25th. Having left ſome of my plants in the hands of the painter, that he might take a drawing of them, I followed the windings of the coaſt in a ſouth-eaſt direction. The large ſlippery pebbles which covered the ſtrand were a great impediment to us in walking.

We found on the ſkirts of the foreſt a fence conſtructed by the natives againſt the winds from the bay. It conſiſted of ſtripes of the bark of the *eucalyptus reſinifera*, interwoven between ſtakes fixed perpendicularly into the ground, forming an arch, of about a third of the circumference of a circle, nine feet in length and three in height, with its convex ſide turned toward the bay. A ſemicircular elevation covered with cinders, and heaped round with ſhells, pointed out the place where the natives dreſſed their victuals. Such a fence muſt be of great ſervice to them to prevent their fires being extinguiſhed, when the wind blows with violence from the ſea.

Having croſſed a promontory of the coaſt, we walked with difficulty over the looſe ſands, which cover a large tract of land, that ſometimes lies under water.

We found another of the fences above deſcribed on the ſkirt of the foreſt. It was of the ſame conſtruction and height as the former, but twice as long. Within it were broken pieces of drinking veſſels made of the *fucus palmatus*.

We arrived at the borders of a lake, which is connected with the ſea at flood-tide. Its greateſt length was 750 toiſes, and its breadth 250.

On our return by a more direct road through the woods, we ſaw ſome unfiniſhed huts of the natives. They conſiſted of branches fixed by both ends into the ground, and ſupported the one upon the other, ſo as to form a frame-work of an hemiſpherical form, about four feet and an half in height. The branches were faſtened together with the leaves of a ſpecies of graſs; and the buildings ſeemed to require nothing more in order to be completed, than to receive their coverings of bark, which renders them impenetrable to the rain.

It ſeems that human beings are here either very few in number or in a very ſavage ſtate. Though a great number of the men from both veſſels had penetrated very far into the country, they had not met with a ſingle inhabitant.

The Cape of Van Diemen is ſubject, in conſequence of its high latitude, to very violent winds, which blow from the mountains in blaſts. Fearing that our cables might rot upon the muddy bottom of this harbour, we had taken them on board and held on our chain. A ſudden and violent gale from N. W. drove us from our anchorage, to the eaſt ſide of the harbour, where we ran aground in the mud. After having drawn in the piece of cable to which the chain was faſtened, we found that one of the links had been broken; though upon examining it we could not perceive any flaw in the iron. It appeared that the chain had been made of brittle metal. We thought it fortunate that it had been put to the proof in a harbour, where we ran no other danger than that of being ſtuck in the mud; otherwiſe this chain, upon which our ſafety depended, would have become the cauſe of our ruin.

26th. I remained the whole day on board, employed with preparing and deſcribing the numerous curioſities of natural hiſtory, which I had collected on the preceding days.

On the following day, ſoon after dawn, we ſet out with a deſign of penetrating as far as we were able into the country. We were ſet on ſhore towards S. E. After having followed the windings of the ſhore for ſome time, we came to a road frequented by the natives, which enabled us to enter the foreſt in a ſouth direction. We afterwards arrived at a fine ſandy beach, extending about 1000 toiſes in the ſame direction.

A beautiful ſpecies of *erigeron*, the woody ſtem of which is covered with very ſmall bulbous leaves, grew in this dry ground. Though there was very little wind, the waves broke with violence over a great extent of the beach. We regularly obſerved that, after three ſucceſſive waves, one much larger than the reſt followed and broke higher upon the beach, ſo as to oblige us to keep further off from the ſhore.

On a ſmall riſing ground of the coaſt, I found the ſpecies of the *bankſia*, denominated by Gærtner *bankſia gibboſa*. Whilſt we were journeying through the foreſt, at a ſmall diſtance from the ſhore, one of our company obſerved a young ſavage, who was running away affrighted by a ſhot which had been fired at a bird. As ſoon as we were informed of it, we all ran in purſuit of him, being very deſirous of having an interview with ſome of the natives. But all our ſearch was in vain; for the young ſavage had diſappeared by ruſhing into the thickeſt of the foreſt at the riſk of tearing his ſkin; for he was ſtark naked. We found one of the fences againſt the ſea-winds at the place where he had been firſt ſeen.

The hope of meeting with ſome of the ſavages determined us to penetrate ſarther into the foreſt, with a reſolution to paſs the night there. We walked for the ſpace of an hour towards the ſouth-eaſt, over a very rugged path, before we arrived at a large plain that extended as far as the ſea-ſhore. A beautiful ſpecies of the *mimoſa* grew here, with long oval leaves, and generally about twenty-five or thirty feet in height.

Night compelled us to look out for a place of ſhelter. We could not have recourſe to the cavities burnt in large trees by the natives, as we were too far diſtant from them: we therefore conſtructed a hut of branches, which we had lopped from the trees with a pole-axe that one of our company carried with him for his defence. The hardneſs of the ground was meliorated with a bed of fern, of a ſpecies very nearly reſembling the *polypodium dichotomum.*

Being cloſe to the ſhore, we had a very extenſive proſpect, but obſerved no ſigns of the natives being near us. We kindled a fire as the weather was very ſharp.

We were not altogether eaſy with reſpect to our means of ſubſiſtence; for when we left the ſhip we had furniſhed ourſelves with but one day's proviſions; but as ſailors are uſed always to take ſome ſea-biſcuit with them when they go on a journey, thoſe who accompanied us were ſtill provided with ſome of it. With this ſtock of eatables, our moſt neceſſary requiſite was water, which we were obliged to ſend for to a diſtance of 1000 toiſes. Such a ſupper as this certainly required a good appetite.

As we were ſeven in number, we had not much to fear from the natives. We however ſettled it that every one ſhould ſtand upon watch in his turn, that we might be informed of their motions in caſe any of them ſhould come near us.

The ſeverity of the cold obliged us to quit our hut and lie down to ſleep round the fire.

28th. As ſoon as it was day we went out with our guns, to endeavour to ſhoot ſomething for our breakfaſt. We ſoon killed a couple of rooks, which were immediately broiled and eaten, as if they had been the moſt delicate food.

We had been obliged to reduce ourſelves to a very moderate allowance on the preceding evening, that we might have means of ſubſiſtence for the following day; but we found, when it was too late, that the perſon to whom we had intruſted the care of our proviſions, was not to be depended upon, for of the ſix biſcuits that had been committed to his charge, only four were left. Had he carried his breach of truſt a little farther, we ſhould have been obliged to return to the ſhips immediately, with the mortification of being compelled to relinquiſh our intended reſearches.

We ſoon arrived at the borders of a large lake, connected with the ſea by a channel about 120 feet in breadth. We attempted to ford it, but it was too deep about the middle.

Amongſt a great variety of other plants that grew in the neighbouring woods, I obſerved ſeveral ſpecies of a new genus of the *pedicularia*, very nearly reſembling the *polygala*. Amongſt the ſhrubs which ornamented the grounds near the ſhore, was a beautiful ſpecies of ſenſitive plant with ſimple leaves, the ſtalk of which was bent into the form of the letter S.

We ſaw a large flock of black ſwans ſailing upon the lake; but they were not within reach of our guns. Some ſmall iſlands were viſible towards S. E. near the oppoſite ſhore of the lake. We killed a number of ſnipes of different kinds while we directed our march towards S. W. in order to arrive at the fartheſt extremity of the lake. The bottom of the lake is here ſo even, that throughout a ſurface of more than fifty toiſes in length, the water is hardly more than a foot and an half deep. It is covered with a prodigious quantity of ſhells, many of which are decayed in conſequence of the length of time they have lain there.

The

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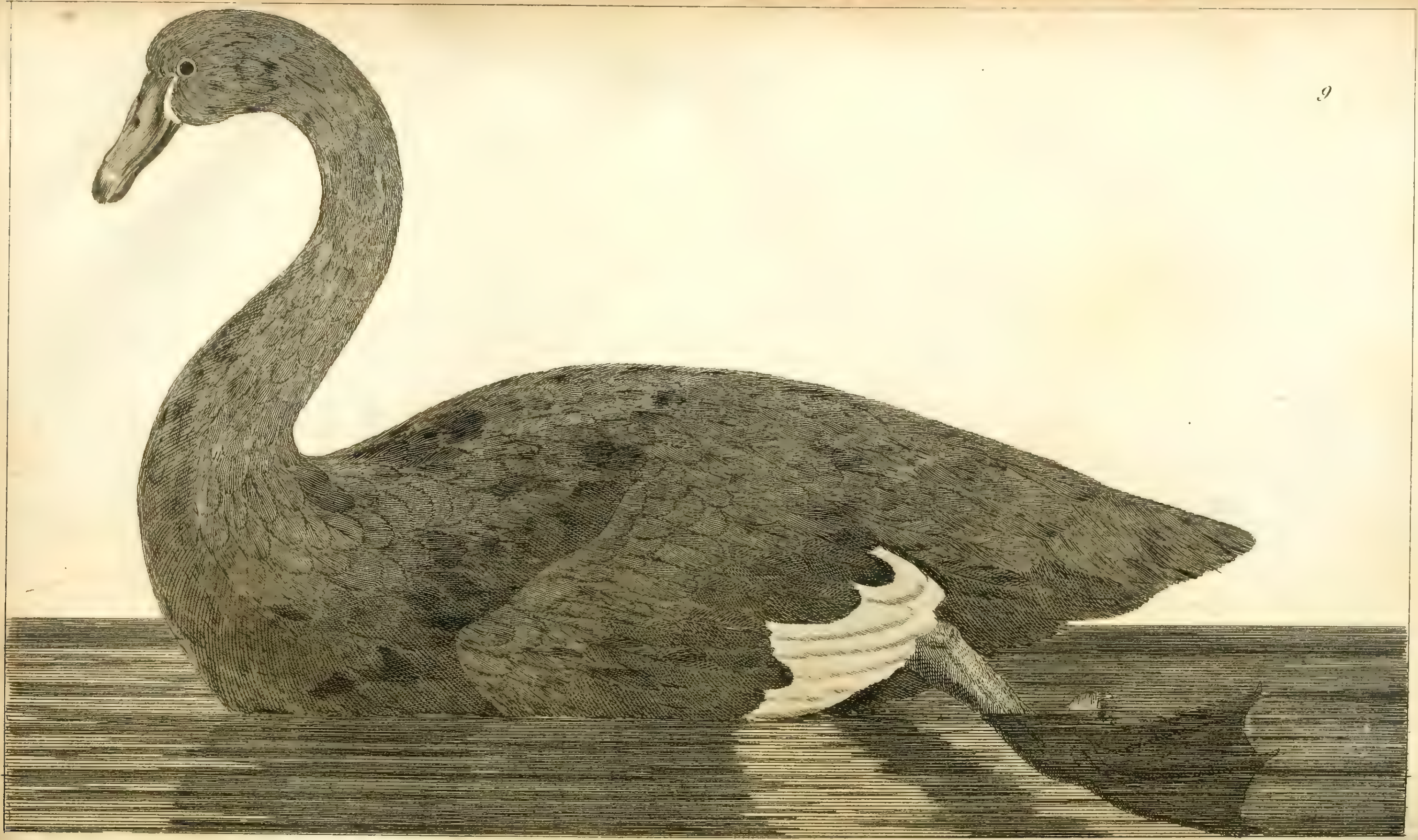


Black Swan of Van Diemen's Land

The *criſta marina* is found upon theſe ſhores. I diſcovered at a little diſtance from them a new ſpecies of parſley, which I named *apium proſtratum*, on account of the poſition of its ſtem, which always creeps along the ground. Its analogy with the other ſpecies of the ſame genus, led me to think it might be good to eat, and it anſwered my expectations. We carried a large quantity of it on board with us, which was acceptable to mariners who felt the neceſſity of obviating, by vegetable diet, the bad effects of the ſalt proviſions on which we had lived during the whole of our paſſage from the Cape of Good Hope to that of Van Diemen.

Cretin, one of the officers of our ſhip, together with the engineer, had been ſent with the longboat by our Commander, in order to reconnoitre Tempeſt-bay. They brought intelligence at their return, after having advanced fifteen or twenty thouſand toiſes into a channel which we had left on our right when we entered the bay, that every appearance concurred to make it probable that this was a ſtrait. Wherever they had ſounded they found very good anchorage ground.

29th. I was very little on ſhore during the two following days.

30th. The whole forenoon I employed in deſcribing and preparing the copious collections which I had made on my laſt excurſion. In thoſe parts of the country which I examined in the afternoon, I found ſeveral plants of the tribe of *orchis*, ſome of which I gave to be copied by the painter.

The fiſhing nets were regularly ſent out every evening, and abundance of fiſh was taken. The meals we now made on board contraſted very ſtrikingly with thoſe we had been obliged to put up with during our paſſage.

I muſt here remark, that thoſe of our company who were engaged in the purſuit of natural hiſtory, were not permitted to take with them, on their excurſions, the ſmalleſt quantity of that allowance of freſh proviſions which we claimed as our right: ſhip's biſcuit, cheeſe, brandy, and ſometimes a little ſalted bacon, was all that was provided for us. The reaſons we alledged were ſufficient to evince the juſtice of our demand; nevertheleſs, we had no other proviſions allowed us on theſe occaſions, during the whole courſe of our expedition. I ſhould have paſſed over this circumſtance in ſilence, had I not thought that it might afford a uſeful hint to perſons employed in the ſame purſuit, who may hereafter be engaged in ſuch expeditions.

May 1ſt. I reſolved to examine the other coaſt of the harbour to the eaſtward. The bottom was here ſo ſhallow, that we could not come cloſe to the land with our boat, ſo that we were obliged to wade part of the way in the water.

I followed the coaſt in a northerly direction, ſometimes penetrating a ſhort way into the foreſts. As it was low-tide, I walked with great facility along the ſhore, where I obſerved ſeveral ſmall holes, in the form of a tunnel, made in the ſand, each of which contained a ſmall crab at the bottom. Upon drawing out the animal, it ſoon crawled back into its hiding place, which, as I judge from its analogy with that of the *formica leo* in our country, ſerves it likewiſe as a trap to catch its prey.

I was agreeably ſurpriſed by the ſingular form of a new ſpecies of fungus, which grew amongſt the moſſes with which the ground was covered. I named it *aſeroë*, on account of the diſpoſition of its radii.

Its roots are ſmall filaments attached to a fungous tubercle, which ſupports a globular *volva*, of a whitiſh colour and gelatinous conſiſtence, marked both within and without with ſeven ſtriæ.

From the centre of this volva proceeds a *ſtipes* of a reddiſh colour, and an almoſt cylindrical form, hollow throughout, and open at its ſuperior extremity, which forms a ſort of cup, of a fine red colour, and divided into ſeven *bifurcate radii*, yellow at their extremities. The whole ſurface of this fungus is ſmooth.

This new genus ought to be placed next in order to the genus *phallus* of Linnæus.

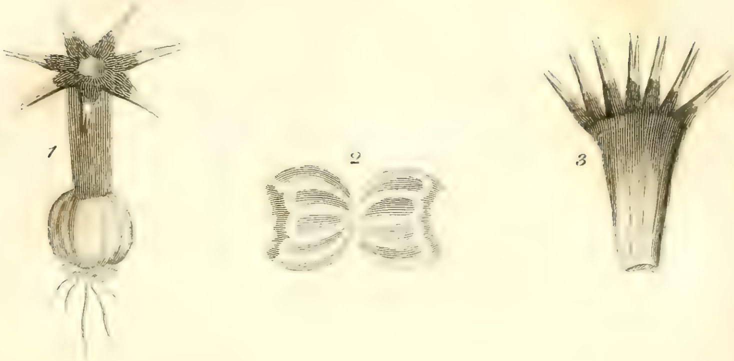
Explanation of the figures in Plate XII.

Fig. 1. The fungus.

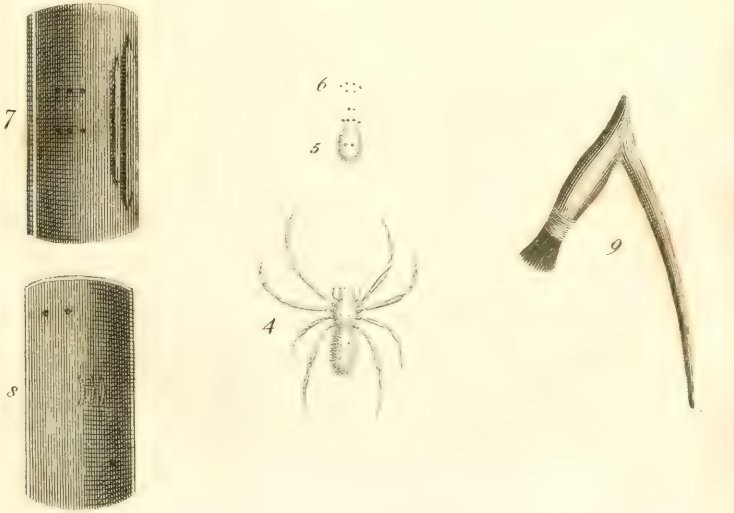
Fig. 2. A tranſverſe ſection of the volva, ſhewing its interior parts.

Fig. 3. A longitudinal ſection of the ſtipes.

The declivities of the mountains ſituated to the eaſtward, form a pleaſant valley, from whence the waters, collected there by the union of a great number of ſmall ſtreams, are diſcharged into the bay. By waſhing the ſtems of the large trees which cover the country, through which it flows, the water acquires a browniſh tinge. The cloſeneſs of the ſhrubs, and the marſhes which occupy the low grounds of this valley render it very difficult of acceſs. We were, however, reſolved to attempt it at the riſk of ſticking faſt in the mud; but were often ſtopped in our progreſs, by a new ſpecies of the *ſcleria*, to which I gave the name of *ſcleria grandis*, as it frequently grows to the height of twelve feet. Its leaves are as ſharp at the edges as a piece of glaſs; its berries are oval and of a reddiſh colour, and contain a ſort of almond,



1. Aseroe Rubra.



4. Spider which the Caledonians eat.

Pubd by I. Stockdale, Piccadilly, 15th April, 1800.

which the parrots frequently feed upon, notwithſtanding the hardneſs of the ſhell which ſurrounds it.

The moſt common ſhrub in theſe low grounds was a new ſpecies of the *embothrium*, remarkable for the hardneſs of its leaves. Theſe leaves are of an oval form, three inches in length and one in breadth.

We followed a very difficult path, in order to arrive at the place where our men were taking in water. Night overtook us before we had finiſhed more than half our journey, and to add to our misfortunes, a very high wind from the weſt brought with it ſuch a heavy rain, that we were obliged, like the ſavages of New Holland, to ſeek for ſhelter in hollow trunks of trees. We had reaſon to apprehend that the ſignals we made for a boat to come to fetch us, would be rendered uſeleſs by the rainy weather, and were beginning to make preparations for paſſing a very unpleaſant night in the midſt of the foreſt; when we heard the voices of ſome ſailors who were ſent to fetch us on board.

They had at length ſucceeded in extricating the anchor to which the chain that was broken on the 25th of April had been faſtened. The drag had been uſed in vain as the chain was ſunk too deep into the mud. The hold of the anchor in the ground was ſo ſtrong, that the two long boats laſhed together were repeatedly filled with water whilſt they were hauling at the buoy-rope. Beſides, it was ſunk ſo deep, that the divers could not find its bill: it would have been better if the main capſtan had been uſed. They then became ſenſible of the neceſſity of doubling the buoy-rope and heaving the anchors from time to time, to prevent them from ſinking too deep in the muddy bottom.

Two boats had been ſent a ſecond time to reconnoitre the north-eaſt ſide of Tempeſt-bay, as far as Cape Taſman. They returned at the end of four days, and it appeared to reſult from their obſervations, that Taſman's head-land and the coaſt of Adventure-bay made part of an iſland ſeparated from Van Diemen's land by the ſea. After they had gone up the channel as far as 43° 17′ S. lat. they were obliged to return for want of proviſions.

2d. My occupations on board did not permit me to go far into the country.

3d. On the following day we traverſed a glade that extended in a north-eaſt direction, and conducted us to the great lake. We had examined the ſouthern ſide of it in a former excurſion, but we wiſhed ſtill to viſit its northern coaſt, the various ſituations of which gave us reaſon to expect an abundance of natural curioſities: nor were our hopes deceived. This coaſt was in many places formed of high banks, very difficult of acceſs; the water frequently extending as far as the foot of the hills. Different ſpecies of *mimoſa,* with ſimple leaves, grew under the ſhade of the large trees.

It appears that the natives ſometimes fix their habitations upon the borders of this lake, which affords them abundance of food in the ſhell-fiſh it contains. We found a hut which they had built a few paces from the ſhore, of a ſemi-oval form, about three feet and three quarters high, and four feet broad at the baſe. It conſiſted of branches fixed at both ends into the ground and bent into a ſemi-circular form, ſupporting each other, ſo as to form a pretty ſolid frame-work, which was covered with the bark of trees.

Amongſt a number of other curious plants which I collected, I was ſtruck with the beauty of the flower of a new ſpecies of *aletris,* remarkable for its bright ſcarlet colour.

As the ſeaſon was already far advanced, we found very few inſects.

Some hours before ſun-ſet we directed our courſe to the ſouth in order to return to our ſhips; but it was already dark before we arrived at a ſandy beach that we were acquainted with. We were ſtill at a great diſtance from the ſhips, and it was not before half an hour after nine o'clock that we arrived at the tents of obſervation, from whence we were ſoon conveyed on board.

5th. I remained on board during the greater part of the two following days, and employed myſelf with ſtuffing the ſkins of a variety of rare birds, and deſcribing the natural curioſities which I had collected.

The want of room in our veſſel put me under the neceſſity of drying the plants, which I had preſerved in paper, at the fire. As my cabin was already full, I had no other place where I could depoſit ſome of my ſpecimens of plants that had not got perfectly dry than the great cabin. Dauribeau, who acted as firſt lieutenant, thought that this place ought not to be lumbered with ſuch uſeleſs things as natural curioſities, and ordered my two preſſes, with the plants they contained, to be turned out. I was obliged to appeal to the Commander, who annulled this act of authority, and ordered that the preſſes ſhould remain where I had placed them.

At low water we found a variety of curious ſhells on the ſhore. Tihs harbour afforded us great plenty of very fine oyſters.

The eaſt coaſt of the harbour contained a quantity of pyrites in cryſtals of various forms.

We likewiſe obſerved large maſſes of ſilex in very cloſe ſtrata, which bore a great reſemblance to petrified wood.

One of our carpenters killed an amphibious animal of the ſpecies known by the name of *phoca monachus,* about ſix feet in length.

Phyſiologiſts have explained in a very ingenious manner how amphibious animals are enabled to remain ſo long under the water by means of the *foramen ovale*; but, upon examining the heart of this animal with the utmoſt attention, I did not find that it had any *foramen ovale*. Probably the ſame may be the caſe with many other amphibious animals. By purſuing theſe reſearches we may one day diſcover the true cauſe of the aſtoniſhing faculty poſſeſſed by theſe animals, of living equally well both in the air and in the water.

Each ſide of its lungs is divided by a tranſverſe fiſſure into two lobes.

The ſtomach, which reſembles in ſhape very nearly that of a hog, contained a large quantity of calcareous ſand, amongſt which I obſerved ſeveral ſhell-fiſh that were ſtill entire. The firſt part of the function of digeſtion in this animal ſeems to conſiſt in deſtroying the ſhell in which the fiſh is encloſed, whereby a quantity of ſand is produced in its ſtomach, which does not appear to paſs through the reſt of the inteſtinal canal, but is probably diſgorged in the ſame manner as many ſnakes diſgorge the bones of the animals on which they feed. Poſſibly too this ſand may ſerve them as a ſort of ballaſt, by which they are enabled to keep themſelves at the bottom of the ſea.

As the food upon which they live is very eaſily found, their mouth is formed with a very ſmall orifice. As they live more in the water than in the air, they require a great power of refraction in the humours of the eye; whence the vitreous humour is found to be very denſe. They are likewiſe provided with the *membrana nictitans*, whereby they are enabled to admit a greater or leſſer quantity of light to the eye at pleaſure.

The great variety of my other occupations did not permit me to purſue theſe anatomical inveſtigations any farther.

The dried excrements of this animal produce a very fine powder of a deep yellow colour, which our painter thought might be uſed with advantage in the arts.

6th. I had not as yet been able to procure any of the flowers of a new ſpecies of the *eucalyptus*, remarkable by its fruit, which very much reſembles a coat-button in ſhape.

This tree, which is one of the talleſt in nature, as it grows ſometimes to the height of 150 feet, bloſſoms only near its ſummit. Its trunk exactly reſembles that of the *eucalyptus reſinifera,* when its ſpongy bark has been peeled off. In other reſpects theſe two ſpecies are nearly of the ſame dimenſions. The trunk, which is very ſtraight, at leaſt to one half of its height, might be uſefully employed in ſhip-building, and eſpecially for maſts, although it is neither ſo light nor ſo elaſtic as that of the fir. Poſſibly it might be of advantage to conſtruct maſts of different pieces of timber, and even to perforate the large trunks of trees throughout their whole length, ſo as to render them lighter, and to give them ſtrength by binding them at equal diſtances with hoops of iron. By this means, I ſhould think, they might be rendered as ſtrong as one could wiſh ; ſince perſons verſed in mechanics know that a cylinder, though hollow, ſtill retains a great degree of ſtrength.

We were obliged to cut down one of theſe trees in order to obtain its bloſſoms. Being already in a very ſlanting poſition, it was eaſily felled. As the ſun ſhone very bright the ſap was mounting in abundance, and as ſoon as the tree was cut down it flowed very copiouſly from the lower part of the trunk.

This beautiful tree, which belongs to the tribe of the myrtles, has a very ſmooth bark; its branches are ſomewhat crooked, and have towards their extremity alternate leaves, ſlightly bent, and about ſix inches in length, and one-half in breadth.

The flowers are ſolitary, and grow from the baſe of the ſtalk of the leaf.

The calix is ſhaped like an inverted urn, and conſiſts, like that of the other genera of the ſame tribe, of a ſingle leaf, which falls off as ſoon as the ſtamina are completely formed.

It has no corolla.

The ſtamina are numerous and attached to the ſides of the receptacle.

The ſtyle is ſimple and divided at its baſe into four partitions. It has only one ſtigma.

The capſule is open at the top, and generally divided into four partitions, which contain a number of angular ſeeds; at the baſe it has four angles, two of which project more than the reſt. It is ſhaped like a button; on which account I have denominated this tree *eucalyptus globulus.*

Explanation of the Figures in Plate XIII.

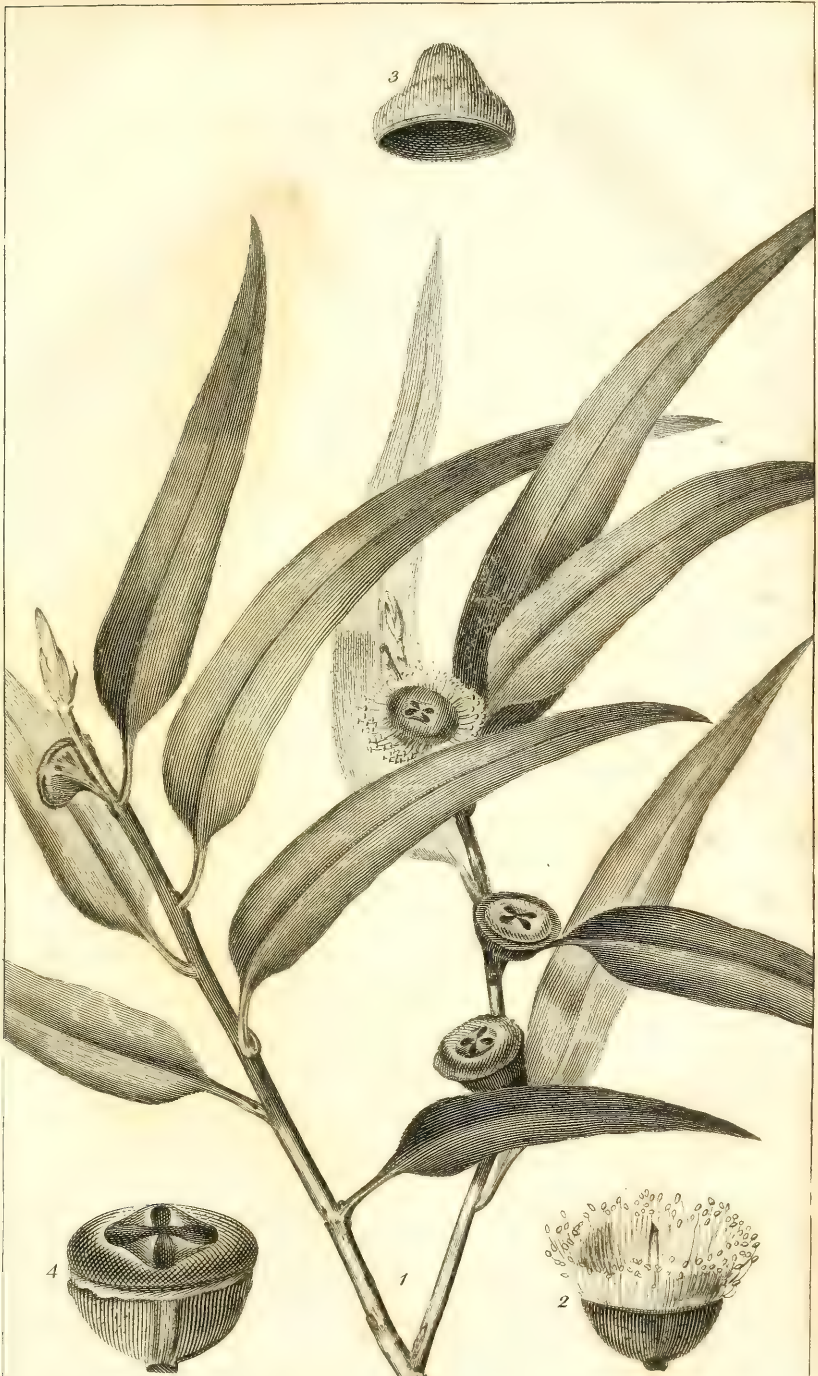
Fig. 1. Branch of the eucalyptus globulus.

Fig. 2. Flower.

Fig. 3. Fruit.

Fig. 4. Calix.

The bark, leaves and fruit of this tree are of



Eucalyptus Globulus.

Pub.^d by I. Stockdale, Piccadilly, 15.th April, 1800.

an aromatic nature, and might be employed for economical uſes in the place of thoſe aromatics with which we have hitherto been furniſhed exclusively by the Molucca Iſlands.

On the ſeventh, I was obliged to employ almoſt the whole day in preparing my collections, which accumulated prodigiouſly from day to day. I could therefore extend my reſearches only to a very ſmall diſtance from our anchoring-ſtation. But on the following day, I ſet out in the afternoon with a deſign of ſpending three or four days in the woods without returning at night to the ſhips. I was obliged to take this reſolution in order to collect ſpecimens of ſuch plants as only grew at a conſiderable diſtance from our ſtation.

We had a great variety of different kinds of European grain on board, which might be advantageouſly propagated at this extremity of New Holland. The temperature that generally prevails in this country led us to hope that they would ſucceed. Our gardener was directed to prepare a ſpot of ground ſo as to render it fit for receiving this depoſit. He dug a ſmall garden for this purpoſe on the eaſt coaſt of the harbour, ſituated E. N. E. of our place of anchorage.

We ſlept on the banks of a rivulet near the weſtern extremity of the great lake, along the ſouthern coaſt of which we directed our route on the following day. We ſaw ſome pelicans; but they did not come within gun-ſhot of us.

Piron, the painter to the expedition, who was of our party, took ſeveral drawings of the landſcape. The round hills, covered with tall trees, which bounded the horizon added greatly to the beauty of the proſpect.

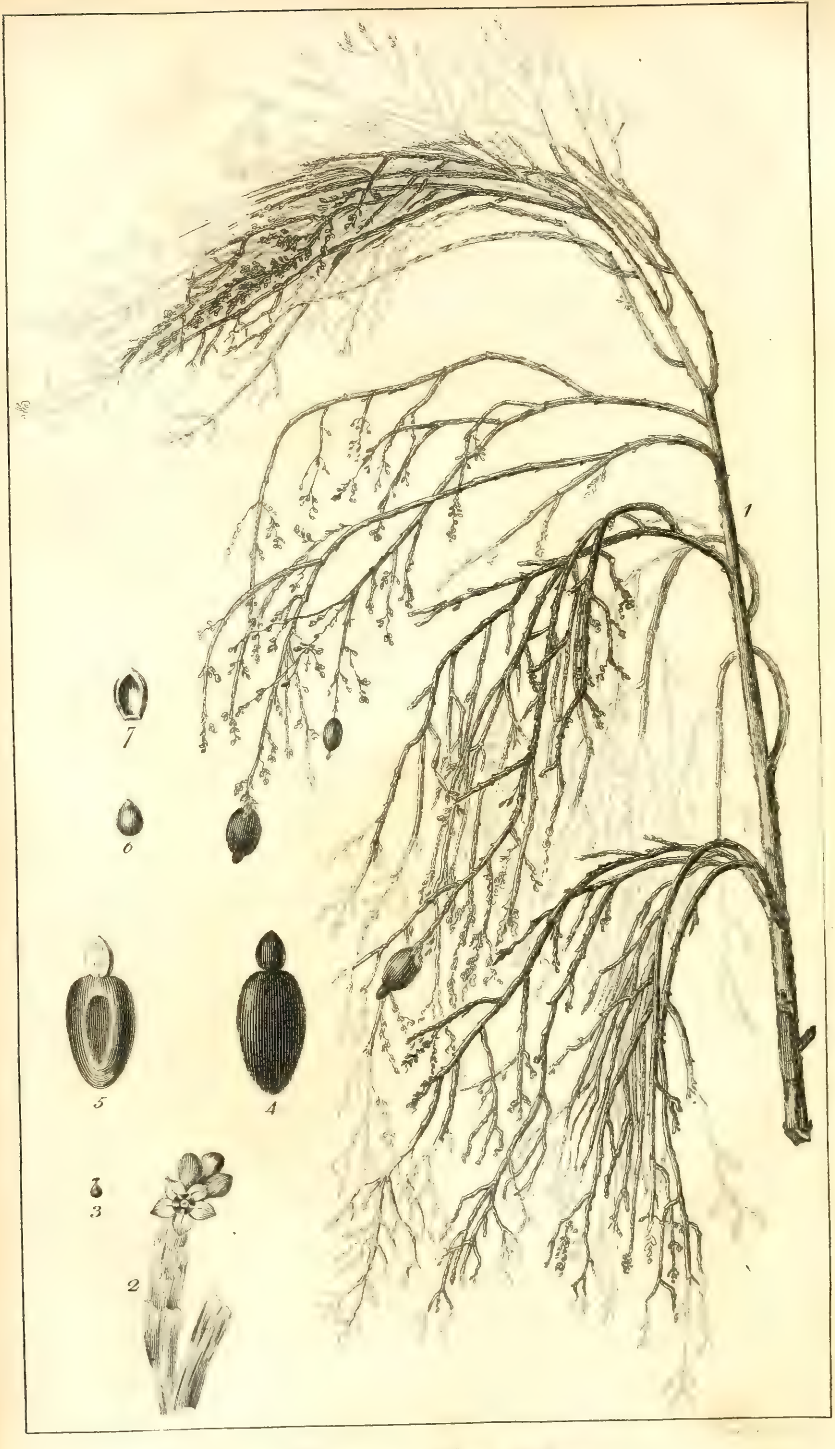
We were obliged to return back by the road we had come, in order to arrive at the oppoſite ſide of the lake. Piron returned on board.

I diſcovered an evergreen tree, which has its nut ſituated, like that of the acajou, upon a fleſhy receptacle much larger than itſelf. I therefore named this new genus *exocarpos*.

It has hermaphrodite flowers upon the ſame peduncle with others which are diſtinctly male and female.

The male flowers have a calix divided into five roundiſh leaves; they have no corolla; the ſtamina, which are five in number, are ſmall and attached to the calix between its diviſions; the germen abortive.

The female flowers have a calix ſimilar to that of the male; but neither corolla nor ſtamina: the ovarium is globular, with a ſhort ſtyle; the ſtigma circular and flat.



Exocarpos Cupreſsiformis.

Pub.d by I. Stockdale, Piccadilly, 18th April 1800.

In the hermaphrodite flowers, the calix, ſtamina and ovarium are as I have deſcribed them in the others.

The fruit is a nut of an almoſt ſpherical form, and of a blackiſh colour, placed upon a receptacle, fleſhy, red, divided in the middle, and about three times as large as the nut.

The kernel is of an oily nature, and of the ſame ſhape with its ſhell.

The principal characters of this plant have led me to rank it among the terebinthinaceous tribe, next to the anacardium. I have given it the name of *exocarpos cupreſſiformis.*

Explanation of the Figures Plate XIV.

Fig. 1. A branch of the exocarpos cupreſſiformis.

Fig. 2. Portion of a branch in flower.

Fig. 3. Germen, with its ſtyle and ſtigma.

Fig. 4. Fruit.

Fig. 5. The fruit divided longitudinally, ſhewing a cavity in the middle of the fleſhy peduncle.

Fig. 6. The nut.

Fig. 7. Part of the woody ſubſtance ſurrounding the nut.

Towards the cloſe of the evening we arrived at the banks of a rivulet, where we fixed our place of abode for the night. I obſerved at this ſouthern extremity of New Holland ſeveral ſpecies of *anciſtrum,* analogous to thoſe found at the ſouthernmoſt extremity of America.

We were ſurrounded with pleaſant groves, conſiſting for the greater part of a beautiful ſpecies of *theſium* with ſtrait leaves.

The cold had obliged us to kindle a large fire. Some of us were ſcarcely beginning to fall aſleep, when we ſuddenly heard the cry of a beaſt of prey at a few paces diſtance. Our fire had probably been of greater ſervice to us, in preventing this animal, which from the ſound of its voice we believed to be a leopard, from approaching nearer, than we ſhould have expected when we kindled it.

I had found, on one of the preceding days, the upper jaw-bone of a large animal of the carnivorous tribe.

10th. As ſoon as the day appeared, we continued our journey on the borders of the lake. At a very ſmall diſtance from the coaſt we obſerved five iſlands covered with trees, which formed an agreeable contraſt with the level ſurface of this vaſt ſheet of water.

We perceived, for the firſt time in this country, ſeveral quails that flew at a great diſtance from us.

After marching for ſeveral hours towards the north-eaſt, we found upon a ſmall hill, under the ſhade of ſome very tall trees, two huts of the ſame conſtruction with thoſe we had ſeen before. They were in perfectly good preſervation, and ſeemed to have been lately inhabited.

I diſcovered a very beautiful plant, which forms a new genus very diſtinct from any that has hitherto been deſcribed. It reſembles the iris, but has only two ſtamina. On account of this ſingularity, I gave it the name of *diplarenna*, and on account of its affinity with the genus *moræa*, I called it *diplarenna moræa.*

The ſpatha has two partitions, and incloſes ſeveral flowers, which leave it one after the other when they are ready to blow. They fade much ſooner than thoſe of the *iris* and *moræa*, ſo that I ſhould have given up all hopes of having them copied, if new ones had not followed the others which withered almoſt immediately after I had plucked the plant from the ground.

Like the iris, it has no calix.

The corolla has ſix petals, three of which are interior, and much ſmaller than the exterior: of the three interior petals, the ſuperior is rather ſmaller than the reſt, and more inflated towards the baſe.

Upon examining a great number of the flowers, I have uniformly found that they contain only two ſtamina, the filaments of which terminate in a point ſupporting antheræ of a white colour, and marked with two fiſſures. In the place of a third ſtamen, I have only found a ſmall filament, without any antheræ, ſituated between the ſuperior interior petal.

The ovarium is inferior. It has three angles, and is ſupported by a long peduncle.

The ſtyle is a little longer than the ſtamina, cylindrical, and terminated by a ſtigma ſhaped like a ſhepherd's crook.

The capſule has three partitions, containing ſeveral ſpherical ſeeds, which are fixed to a receptacle that extends from the middle of the partitions to the top.

This genus, which naturally ranks after the *iris* and the *moræa,* has all the habitudes of thoſe plants. Its leaves are of the ſame ſword-like form, with their edges compreſſed near the baſe.

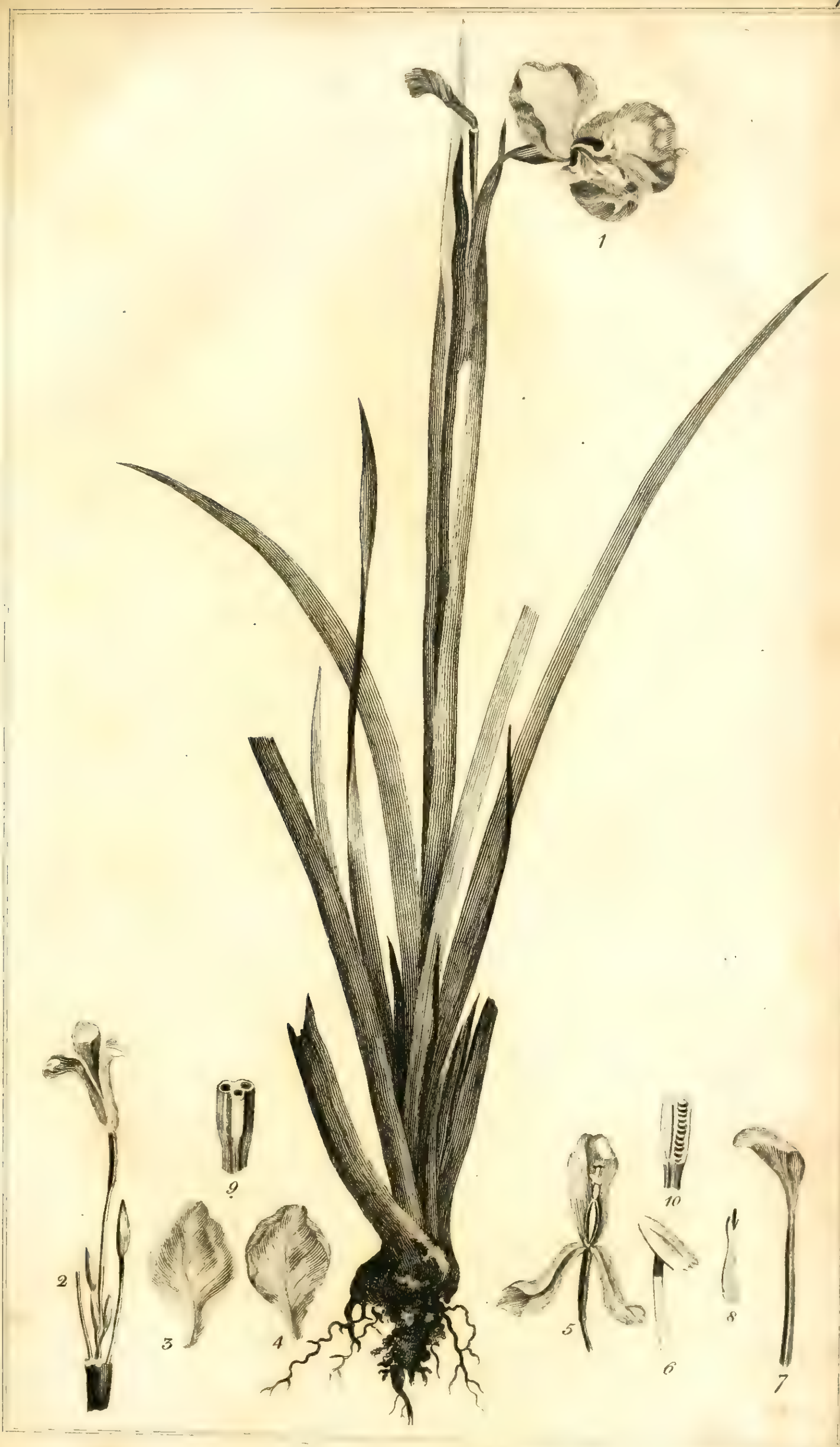
Explanation of the Figures in Plate XV.

Fig. 1. The plant.

Fig. 2. The flower-buds diſplayed by cutting away the ſpatha. A full-blown flower with the three exterior petals torn off.

Fig. 3. An exterior petal ſeen from its inner ſurface.

Fig.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Diplarrena Moræa.

Pub.d by I. Stockdale, Piccadilly, 15th April 1800.

Fig. 4. The ſame petal ſeen from its outer ſurface.

Fig. 5. Interior petals turned down, to give a view of the ſtamina and ſtyle.

Fig. 6. The ſtamen ſeen through a magnifying glaſs.

Fig. 7. The ſtyle with its ſtigma.

Fig. 8. A part of the germen, the ſtamen and ſtyle having been taken away, in order to ſhew the ſmall filament, which is found in the place of a third ſtamen.

Fig. 9. Lower half of the capſule divided tranſverſely, to ſhew the three partitions.

Fig. 10. Upper half of the capſule divided longitudinally, to ſhew the ſeeds.

As we were walking through a ſmall grove, where the underwood grew very thick, I rouſed a large kangarou at a very ſmall diſtance from me. He immediately ran a length of about thirty paces through one of thoſe narrow paths which theſe animals make for themſelves through the thicket, where they are obliged to uſe all their four feet, as they have no room for an erect poſture; and having reached the farther end, bounded away over the buſhes with ſuch ſwiftneſs, that we ſoon loſt ſight of him.

We found a ſheet of water covered with a prodigious number of wild ducks, which flew up when we were quite cloſe to them; but we were ſo little prepared for ſuch good fortune, that we were not able to kill a ſingle bird.

A high wind ſprung up towards night, which ſeemed to threaten rain. As we had no place of ſhelter near us, we were obliged to ſleep in the open air. We conſtructed a fence againſt the wind with branches, under ſhelter of which it was eaſy to kindle a large fire.

11th. On the following day we directed our courſe eaſtward, and traverſed a vaſt plain, beſet in many places with marſhes, where the plants with which they are overgrown conceal the danger one is expoſed to in paſſing through them. The water collected in the loweſt ſituations gives riſe to a number of very fine rivulets.

A very large kangarou ſprang out of a buſh about four paces from me. I pointed my gun at him, but it miſſed fire, and the animal walked off very compoſedly, following one of thoſe tracks through the thicket which they uſually frequent. Theſe tracks are covered paſſages which croſs each other in every direction, and run very cloſe one to another. The numerous prints of the feet of thoſe quadrupeds obſervable upon them, ſhew that they abound in this country. The beſt way of catching them would be to hunt them with dogs, as they generally keep themſelves in the thickeſt part of the woods. Their tracks generally terminate at ſome rivulet.

Having exhauſted our ſtock of proviſions, we were compelled to endeavour to reach the ſhips before night. We wandered about the woods a long time before we arrived at the north-eaſt extremity of the harbour, from whence we had a diſtant view of our veſſels. It was not without great difficulty that we reached the place where they rode at anchor, as we had to paſs through many very rugged grounds.

12th. The whole day was hardly ſufficient for me to prepare and deſcribe what I had collected on our laſt excurſion.

Having left ſome of my ſpecimens which could not be preſerved without being daily attended to, in the care of one of the ſervants, who remained on board during my abſence; I had the ſatisfaction to find them in good condition.

Citizen Riche found ſome human bones amongſt the aſhes of a fire made by the natives. Several bones of the pelvis he diſcovered by their form to have been part of the ſkeleton of a young woman: ſome of them were ſtill covered with pieces of broiled fleſh. I am, however, ſcrupulous of ranking the natives of this country with the cannibals: I rather ſuppoſe that they have the cuſtom of burning the bodies of their dead;

as theſe were the only human bones that were ſeen during the whole of our abode in this place.

On the 13th I went to the place where our men were taking in their water. It was furniſhed by a ſmall rivulet, which diſcharges itſelf into the harbour, after flowing amongſt the trunks of fallen trees with which the country is covered. The rotten wood gives the water of this rivulet a browniſh tinge. They were obliged to roll the caſks upwards of a hundred yards to the boats, as theſe could not come nearer to the ſhore on account of the ſhallowneſs of the bottom.

We found the carpenters employed in raiſing the ſides of our pinnace, which had ſhortly before been overſet whilſt it was ſailing in the harbour. The crew had been obliged to ſave themſelves by ſwimming till aſſiſtance was brought them. It had been furniſhed with too high a maſt, and much too large a ſail, by the lieutenant, who ought to have underſtood the proportions better.

The wood made uſe of by the carpenters was that of the new ſpecies of the eucalyptus, which I have denominated *eucalyptus globulus*. They thought it very good timber for ſhip-building.

A perpetual moiſture prevailed in the thick foreſts into which I penetrated towards S. W. Moſſes and ferns of various kinds grew there with great luxuriance. I killed a bird of that ſpecies of the *merops*, which White has denominated the wattled bee-eater, and of which he has given a very good engraving. It is remarkable for its two large excreſcences on each ſide of its head.

I was obliged to make great haſte in preparing the ſkins of the birds which I wiſhed to preſerve; for the fleſh, when expoſed to the air, very ſoon became full of ſmall living larvæ, depoſited in it by a fly of a reddiſh brown colour, which is viviparous like that of our country, known by the name of *muſca carnaria.* Theſe larvæ accelerate the putrefaction of fleſh in a ſurpriſing manner.

As we intended to weigh anchor on the following day, I wiſhed to make the beſt uſe of the laſt moments of our ſtay in this place, and went on ſhore at the eaſterly coaſt neareſt to our veſſels.

I viſited, in company with the gardener, the ſpot where he had ſown different kinds of European grains. It was a plot of ground of twenty-ſeven feet by twenty-one, divided into four beds. The ſoil was rather too full of clay to inſure the ſucceſs of the ſeed.

When we had entered the woods, a quadruped of the ſize of a large dog ſprang from a buſh quite near to one of our company. This animal, which was of a white colour ſpotted with black, had the appearance of a beaſt of prey. There can be little doubt that theſe countries will at ſome future time add ſeveral new ſpecies to the claſſes of zoology. A ſpinal vertebra, that was found in the interior part of the country, the body of which was about four inches in diameter, gives reaſon to believe that very large quadrupeds will ſome time be diſcovered here.

A very heavy rain, which overtook us about the middle of the day, obliged us to halt. We ſheltered ourſelves in the hollow trunk of a large tree that was upwards of twenty-four feet in circumference. We attempted to kindle a fire in it after the manner of the New Hollanders, but the ſmoke ſoon drove us from our retreat.

We endeavoured to penetrate into parts which we had not yet viſited. A glade, at which we arrived, ſeemed to conduct us towards the north-eaſt plain. We had only three hours of the day before us. A ſteep aſcent impeded our journey, large trees heaped one upon another obſtructed the path, and the ſhrubs, to which the moiſture that prevails in theſe foreſts, give an uncommonly luxuriant growth, increaſed the difficulties we had to encounter. Amongſt theſe ſhrubs was a beautiful ſpecies of polypodium, the ſtem of which grows to the height of twelve feet.*

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* The reader will eaſily excuſe me for not enumerating by name all the curioſities of natural hiſtory, which I collected during this expedition; eſpecially as I intended to do it in a ſeparate work.

Towards cloſe of evening we found ourſelves on the borders of the leſſer lake. The woods that ſurrounded it did not permit us to follow it dry-ſhod in all its windings: the water through which we had to wade was, fortunately, not very deep. Notwithſtanding the darkneſs of the night, I diſcovered a new ſpecies of *reſtio*, which I had never ſeen before.

This lake, though it is connected with the ſea at high water, does not abound with fiſh. Some of the crew of the Eſperance had been here, with their nets, but caught nothing.

Having reached the ſea-ſhore, we had ſtill a conſiderable part of our march before us. It was night, and the thick clouds increaſed its obſcurity. Sometimes we were obliged to paſs over large blocks of rounded ſtones waſhed by the ſurge. We groped our way along the ſhore, at the hazard of falling into the ſea, and it was with great difficulty that we were able to ſupport ourſelves on our feet amongſt the wet ſtones, that were rendered ſtill more ſlippery by being covered with fucus and other marine productions.

A great number of phoſphoric animalcules, of different ſizes, were driven on ſhore by the waves, and afforded us the only light we had to direct our ſteps.

At length we arrived at the place where the tents had been pitched for taking aſtronomical obſervations. We found nobody there, as the inſtruments had already been carried on board.

Our maſter ſail-maker having gone the preceding day on a ſhooting excurſion, without any companion, had loſt his way in the woods, where he was obliged to ſpend the night. Several guns were fired to let him know where the ſhips lay at anchor; and in the afternoon he returned on board emaciated with hunger and fatigue. Having ſet out without any proviſions, he had been a day and an half without food. He related, that during the night ſeveral quadrupeds had come to ſmell at him, within a few inches diſtance. Many of the crew believed him on his word; but we, who had ſpent ſeveral nights in the woods, and had never met with ſuch familiarity from the beaſts, were not ſo credulous; but far from imagining that he wiſhed to impoſe upon us, we found, in his narrative, the natural effects produced upon the imagination of a man deprived of nouriſhment, and all alone in the midſt of immenſe and pathleſs foreſts.

15th. On the preceding day the large anchor had been drawn up and a ſmaller one moored, that we might be able the ſooner to leave the harbour. The ſame had been done by the Eſperance. Some ſudden blaſts from the north-eaſt, during the night, drove both ſhips from their anchors and ran them aground in the mud. They, however, ſuffered no damage, and were eaſily ſet again afloat. It was ſurpriſing that they ſhould have thought themſelves ſecure with one ſmall anchor, but juſt moored in a muddy bottom, as this ſort of bottom affords very little hold till the anchor be ſunk to a conſiderable depth.

We only waited for a favourable wind to leave the harbour. During the whole day it was contrary, and in the night time it blew with great violence. Dauribeau, however, although we had ran aground only the night before, thought it ſufficient to moor a ſingle cablet; but his opinion was over-ruled by the reſt of the officers, who knew, from experience, the neceſſity of holding by the large anchor.

During our abode at the Cape of Van Diemen we had only ſeen the natives at at a conſiderable diſtance; thoſe who had obſerved us having always fled with great precipitation. Some of them left behind them their houſehold utenſils, which gave us a very imperfect ſpecimen of their induſtry. Theſe were baſkets, clumſily conſtructed of the reeds known by the name of *juncus acutus*, and drinking veſſels, made of a large piece of *fucus palmatus*, cut into a circular form, and moulded into the ſhape of a purſe. We never found any weapons of defence in the places from whence they had fled: no doubt, they either carried them away, or carefully concealed them, for fear that we might employ them againſt themſelves.

Theſe ſcattered huts indicated a very ſcanty population; and the heaps of ſhells which we found near the ſea-ſhore, ſhewed that theſe ſavages derive their principal means of ſubſiſtence from the ſhell-fiſh which they find there.

As we only once diſcovered human bones in this country, and thoſe partly burnt, it appears that they do not expoſe the bodies of their dead to the open air. It is difficult to know whether it be their uſual cuſtom to burn them: poſſibly they bury them in the earth, or throw them into the ſea.

The great number of tracks marked with prints of the feet of quadrupeds, ſhew that they abound in this country. They probably remain during the day-time in the thickeſt part of theſe inacceſſible foreſts.

A great number of ſmall rivulets diſcharge themſelves into the harbour. The ground was here ſo full of moiſture, that wherever a hole was dug of a moderate depth, it immediately became filled with water.

We generally took copious draughts of fiſhes with our nets; eſpecially when the eaſt and ſouth-eaſt winds drove them into the bay.

Van Diemen's land was diſcovered by Taſman in the month of November, 1642. When Captain Cook anchored here four years after Furneaux, in the year 1777, he thought himſelf the third European navigator who had been upon this coaſt. Cook did not know at that time that Captain Marion, after having remained here for ſome time, ſailed from thence on the 10th of March, 1772. The natives conducted themſelves in a very different manner to theſe two navigators. Poſſibly the gentleneſs with which they behaved to Captain Cook, might be an effect of their terror for European fire-arms, of which they had received an idea from Marion's having been under the neceſſity of uſing them againſt them.

The place of our obſervatory, ſituated near the entrance of the harbour to the right of the veſſels, was 43° 32′ 24″ S. lat. 144° 46′ E. long.

The variation of the magnetic needle was 7° 39′ 32″ E.

The inclination of a flat needle was 70° 30′.

The tides flowed only once a day. The time of high water in the harbour at full and change days, was between nine and twelve o'clock, the water riſing about ſix feet perpendicular height. The tides were very much influenced by the winds,

which

which often advanced or retarded them by ſeveral hours.

The ſheltered ſituation of this harbour renders it the moſt commodious in the world for veſſels to put into in order to be repaired. The vaſt foreſts, with which it is ſurrounded, furniſh a timber which our carpenters conſidered as very proper for ſhip building, and which they employed with great advantage.

During our ſtay of nearly a month at this place, the weather was very unfavourable for making aſtronomical obſervations. The ſeaſon of the year was likewiſe not an eligible one for inveſtigating theſe coaſts, which was rendered ſtill more difficult by the violence of the winds.

Whilſt we remained at the Cape of Van Diemen, the north-weſt and ſouth-weſt winds were very violent: the former were generally attended with ſtorms and heavy rains.

As ſoon as it was day the veſſels were towed to the mouth of the harbour, from whence we ſailed with a north breeze towards the new ſtrait, which we intended to enter.

After ranging along the windings of the reef, which we had left on our larboard ſide when we entered Tempeſt-bay, we were at ten o'clock in the forenoon at the diſtance of about 7,600 toiſes from the entrance of the ſtrait, which bore

N. N. W. when we trimmed our ſails as ſharp as poſſible.

The ſummits of the higheſt mountains were already whitened with the ſnow. Theſe mountains form part of a chain which extends from ſouth-eaſt to north-weſt, and terminates near the fartheſt extremity of the harbour.

We were much gratified in viewing, from the ſhip, the places which we had lately viſited in our excurſions.

At one time we obſerved a thick ſmoke aſcending from the diſtant country to the northward of the great lake, and ſoon deſcried five of the natives walking away from a fire which they had juſt been kindling on the ſhore: one of them carried a fire-brand in his hand with which he lighted the flames in different places, where the fire preſently caught and was almoſt as ſoon extinguiſhed.

We plied to windward, keeping in with the coaſt; as we had no danger to apprehend from approaching it.

A ſlight breeze from the north, as well as the tide, being againſt us, we could not enter the ſtrait before night. We therefore caſt anchor at the mouth of it, in a bottom of grey ſand, at the depth of 30 fathoms. The place where we had pitched our tents of obſervation was then at the diſtance of about 10,000 toiſes to the weſtward.

The mercury in the barometer having been gradually falling for the ſpace of four and twenty hours, remained ſtationary at 27½ inches, though the ſky appeared ſtill very clear. We were not without ſome uneaſineſs, as ſo great a variation in the barometer had never failed during our ſtay in the harbour to be followed by violent winds. Probably ſuch blew at a diſtance, but we experienced none of their effects. During the night we ſaw a fire to the weſt, kindled by the natives.

17th. The current having become favourable about nine in the morning, we weighed anchor with a northerly breeze, and plied to the windward.

We were near enough to the coaſt to be able to perceive at the entrance of the ſtrait a ſort of free-ſtone, ſimilar to that found in port Dentrecaſteaux.

The ſnows had increaſed prodigiouſly upon the ſummits of the high mountains, during the preceding night.

The mercury in the barometer had ſunk to 27 inches 4 4-10th lines, though the breeze from the north ſtill continued ſlight.

It was night when we entered the ſtrait to which we gave the name of our Commander, Dentrecaſteaux. About ſeven o'clock in the evening we caſt anchor in a bottom of blackiſh mud mixed with ſhells, at the depth of 22½ fathoms.

We were in lat. 43° 20′ S.; long. 145° 10′ E.

The Eſperance was appriſed of our having caſt anchor by a ſignal from the main-maſt, and did the ſame at the diſtance of about 1,000 toiſes from us.

The ſlighteſt agitation produced a great degree of phoſphoreſcence in the ſea, during the whole night.

Very violent ſqualls, accompanied with rain, obliged us to pay out our cable, and unbend our top-gallant gear.

18th. The darkneſs of the ſky kept us impatiently awaiting the moment when we could enjoy the beautiful proſpect of the immenſe bay which forms the entrance of Strait Dentrecaſteaux. At length the horizon cleared up. Whereever the eye could reach the coaſt was indented with ſpacious bights in the land, where navigators, driven by ſtreſs of weather, might fly for ſhelter with ſecurity. We ſurveyed with aſtoniſhment the immenſe extent of theſe harbours, which might eaſily contain the combined fleet of all the maritime powers of Europe. The right foreland of the ſtrait bore S. 43° W.

As the wind abated about 11 o'clock in the forenoon, we availed ourſelves of this opportunity to fit out the pinnace. The engineer was diſpatched in order to examine whether an opening ſeen N. 30° E. afforded a paſſage for our veſſels.

The ebb-tide drifted us from eight in the evening till two in the morning at the rate of half a knot every hour to N. W. N.

The ſtiffneſs of the breeze preventing us from ſending any of our boats to the ſhore, we were obliged to remain on board.

19th. On the following day we were landed at the diſtance of 2,500 toiſes S. W. on an iſland which bounds this channel throughout its whole length. A boat belonging to the Eſperance had paſſed the night at the ſame place, and taken a great quantity of fiſh.

It was a great gratification to me to traverſe this country, where I found a large number of new plants, the moſt numerous of which belonged to the genus of *melaleuca, aſter, epacris,* &c.

The ſhore of the channel afforded us a very eaſy path through the buſhes which are here but thinly ſcattered. We afterwards climbed up ſome ſteep aſcents which riſe to about 25 toiſes perpendicular height above the level of the ſea. We here obſerved a quantity of ſea-ſalt depoſited by the waves in the cavities of the hard freeſtone which forms the baſis of theſe hills.

We had ſcarcely proceeded a thouſand toiſes, when the remains of a hut and heaps of ſea-ſhells ſhewed us that this iſland was inhabited.

We ſaw here for the firſt time the partridge of the Cape of Van Diemen. We ſprung a very large covey of them, which lighted at a great diſtance from us.

Late in the evening we met Citizen Riche, who had paſſed the night with the fiſhermen. We gladly accepted his offer to ſhare the fruits of his fiſhery with us, and he ſhewed us a ſmall ſpring, where we had the pleaſure of refreſhing ourſelves with excellent water over a meal of very fine fiſh and muſcles, which we broiled upon the coals after the manner of the New Hollanders. After ſuch a repaſt we had little occaſion for the proviſions we had brought with us from the ſhip.

We were informed that the principal officers of the Recherche had agitated the queſtion among themſelves, whether the gentlemen engaged in reſearches of natural hiſtory had any right to the freſh proviſions diſtributed on board, whilſt they were employed upon ſhore in making the collections which the object of their appointment required. Care was taken that none of their number ſhould be admitted to theſe diſcuſſions; and as they had no one to ſupport their right, the queſtion was ſoon decided againſt them, contrary to every idea of juſtice. I muſt add, that though the perſons who had the charge of providing for our table were frequently changed, they all adhered with the utmoſt punctuality to the dictates of this inequitable decree.

It was already night when our boat came to fetch us. Riche was obliged to avail himſelf of the opportunity; otherwiſe he would have been under the neceſſity of remaining on ſhore. He was, however, compelled to ſtay for the night on board of the Recherche, although it was of great conſequence to him to return to the Eſperance, as the preparation of the ſpecimens which he had collected, required to be immediately attended to.

20th. A ſmall iſland, ſituated S. 42° W. about 2,500 toiſes from our anchoring ſtation, had been denominated Partridge Iſland by ſome of our crew who diſcovered it. Citizen Riche and myſelf ſpent the following day upon the iſland; but inſtead of partridges we found a great number of quails there. Whether thoſe who had firſt viſited it had taken the one fowl for the other, or whether the partridges had ſince left the iſland, I muſt leave undecided.

This ſmall iſland is upwards of 100 toiſes in length, and ſituated in 43° 23′ 30″ S. lat. The new ſpecies of parſley, which I had denominated *apium proſtratum*, grew in abundance upon the ſhore, almoſt as far as high water mark. We took a great quantity of it on board with us.

Many ſpecies of the *caſuarina* grew here, and ſeemed to thrive very well notwithſtanding the humidity of the ſoil. Amongſt the plants which I ſaw for the firſt time was a remarkable ſpecies of the *limodorum*, of which I had a drawing taken; I alſo collected various kinds of ferns, and a beautiful ſpecies of the *glycine*, remarkable for its ſcarlet flower.

No freſh water is found upon this iſland; though ſeveral forſaken huts ſhewed that it had been frequented by the ſavages.

Two of the officers of our veſſel, Cretin and Dauribeau, went about ſix o'clock in the morning to ſurvey the coaſt to the eaſtward of our ſtation, where they found ſeveral bays extending from N. W. to S. E. They obſerved ſeveral creeks, which formed as many harbours; but a ſtrong contrary wind prevented them from examining them farther into the land. Seeing ſeveral fires at a ſmall diſtance from the ſhore, they determined to land; when as ſoon as they had entered the woods, they found four ſavages employed in laying fuel upon three ſmall fires, about which they were ſitting. The ſavages immediately fled, notwithſtanding all the ſigns of amity which they made them, leaving their crabs and ſhell-fiſh broiling upon coals. Near this place they ſaw other fires and huts.

It appears that this ſpot is much frequented, as fourteen fire-places were diſcovered.

One of theſe ſavages, who was very tall and muſcular, having left behind him a ſmall baſket filled with pieces of flint, was bold enough to come quite near to Cretin in order to fetch it, with a look of aſſurance with which his bodily ſtrength ſeemed to inſpire him. Some of the ſavages were ſtark naked; the reſt had the ſkin of a kangarou wrapped about their ſhoulders. They were of a blackiſh colour, with long beards and curled hair.

The utenſils which they left behind them conſiſted of about thirty baſkets made of ruſhes, ſome of which were filled with ſhell-fiſh and lobſters, others with pieces of flint and fragments of the bark of a tree as ſoft as the beſt tinder. Theſe ſavages, undoubtedly, procure themſelves fire by ſtriking two pieces of flint together, in which they differ from the other inhabitants of the South Sea iſlands, and even from thoſe of the more eaſterly part of New Holland; whence there is ground to believe that they are deſcended from a different origin.

They likewiſe left behind them ſeveral kangarou ſkins and drinking veſſels.

The officers forbade the ſailors to take away any of the utenſils of the ſavages: they, however, ſelected two baſkets, a kangarou ſkin, and a drinking veſſel of fucus, to carry to the Commander. The ſavages had no reaſon to regret the loſs of theſe utenſils, as they left, in place of them, ſeveral knives and handkerchiefs, with ſome biſcuit, cheeſe, and an earthen pot, perhaps too brittle, but certainly a very good ſubſtitute for that which had coſt them ſo little labour to manufacture.

The ſavages, though they took very few of their utenſils with them, dropped ſome of them from time to time on their flight. Whether they might do this in order to be able to run the faſter, or whether it was with a deſign to amuſe the Europeans who followed them, I cannot tell.

A boat belonging to the Eſperance had been to examine a creek ſituated to the eaſtward, at the diſtance of about 5,000 toiſes. They had met with one of the natives, who, notwithſtanding all the ſigns of amity they made him, would not let them come within two hundred paces diſtance of him. A fine rivulet diſcharges itſelf into the ſea near the fartheſt extremity of the creek. The ſituation of this creek, oppoſite to an iſland which ſhelters it from the ſurges, renders it an excellent place of ſhelter for veſſels that ſtand in need of any repairs.

The other creeks which they examined afforded in general very good anchorage.

They diſcovered a bay that extended ſo far to the north-eaſt, that they could not get within view of its extremity. Poſſibly ſome of theſe bights in the land may be parts of channels which communicate with the ſea on the oppoſite ſide.

The preparation of the ſpecimens which I had collected on the preceding days, employed my whole leiſure on the 21ſt.

The gardener went with ſix other perſons in the long boat, with the view of landing at the iſland which I had examined on the preceding day. After having in vain contended with violent and contrary winds, they left the boat adrift, thinking it would run into a creek under ſhelter of a ſmall iſland, ſituated at the entrance of the channel which they had before endeavoured to reach. But this ſtep was very near proving their ruin: their ſail fell into the ſea, and the boat, being ſuddenly ſtopped in its courſe, ſoon began to be filled with water by the violence of the ſurge. At length they arrived, overcome with fatigue, under the ſhelter of the iſland, where the calm that prevailed afforded them a pleaſing reſpite

ſpite from their toils and dangers. The Commander, anxious about their fate, ſent a boat in the afternoon in queſt of them, as he knew that whilſt the wind remained ſo unfavourable, the long boat could not return to the ſhip without aſſiſtance. Towards cloſe of evening, we had the ſatisfaction of ſeeing them return on board. They told us that having proceeded along the coaſt in a S. S. E. direction, they found by ſome fires that the ſavages were near; that they had ſoon met with ſeveral of them, who were the ſame that had been ſeen the day before, but that they did not ſuffer them to approach them. They found ſome ſhell-fiſh broiling upon the fires which the ſavages had left with precipitation, and more than thirty kangarou ſkins which they found at a little diſtance, ſhewed them to be very expert in hunting.

It appeared that they had made uſe of the bread and water, which had been left for them on the preceding day; but the ſmell of the cheeſe had probably given them no inclination to taſte it, as it was found in the ſame condition in which it had been depoſited. They found at the ſame place one of the knives and handkerchiefs that had been left among the utenſils of the natives.

Some ſhots that were fired at birds, probably terrified theſe ſavages; for when ſome of our men went to the ſame place two days afterwards, they ſaw none of them.

22d. The boats were ſent to take in water at a creek that had lately been diſcovered to the eaſtward. I availed myſelf of the opportunity to viſit this place, which was ſituated at the diſtance of about 5,000 toiſes from our anchoring ſtation. It forms a harbour, about 150 toiſes in breadth and 500 in length, with ſufficient bottom for large veſſels to ride at anchor in it. A rivulet that diſcharges itſelf into it near its extremity, affords very good water, which, however, was not eaſily taken in by the boats, ſince, in order to have it perfectly pure, it was neceſſary to roll the barrels from the diſtance of more than 150 toiſes over the muddy bottom. Our men might have been ſpared this unhealthy labour, if pipes of leather or of ſail-cloth, ſmeared over with tar, had been employed, by which the water might eaſily have been conveyed into the boats. The advantages of ſuch a practice will particularly be apparent in caſes where the impracticability of entering a rivulet with the boats obliges mariners to take in brackiſh water; whereas, by means of a pipe carried a few hundred yards higher up the ſtream, they might procure it without any admixture of ſea-water, which renders it very unwholeſome to drink.

The banks of this rivulet produced ſeveral new ſpecies of *caſuarina,* one of which was remarkable for the club-like form of its fruit. I alſo obſerved a pretty tall ſhrub, which eſtabliſhes a new genus of the cruciferous tribe.

The tracks of the kangarous were very numerous, terminating at the rivulet, where theſe animals frequently come to drink.

As the wind had been againſt us when we ſailed for this watering place, we had a right to expect that it would be favourable to our return; but a calm ſupervened, and it laſted ſeveral hours before we reached the ſhips.

The pinnace returned after a voyage of four days, in which the whole extent of the ſtrait had been ſurveyed. It is about 20,000 toiſes in length from S. W. to N. E. They had every where found a depth of at leaſt ſix fathoms and an half, over a bottom of mud, and ſometimes of fine ſand. It is ſeparated from Adventure-bay by a narrow ſlip of land, not more than 200 toiſes at its greateſt breadth.

We now waited only for a favourable wind to follow the ſtrait, in order to take an exact ſurvey of it. The N. and N. W. breezes were contrary, and, beſides, ſo ſlight, that we were obliged to remain the whole day at anchor.

During the night we ſaw ſeveral fires of the natives to S. E.

24th. On the following morning we weighed anchor, and plied to windward at the diſtance of about 500 toiſes from the land. We found every where a depth of water of at leaſt 6½ fathoms, over a very good bottom.

Though the thermometer had never indicated more than 7° above the point of congelation, even in the coldeſt mornings, the ſnows had greatly increaſed upon the high mountains ſeen W. N. W.

Whilſt the currents continued favourable we gained ground at every tack; but about ſix o'clock in the evening they became contrary; and we caſt anchor in a bottom of grey ſand at the depth of eight fathoms, very near to the coaſt, and to the northward of the ſtation from whence we had ſailed in the morning.

The natives kindled more than twenty fires upon the coaſt towards the ſouth. Many families of them had probably come down to the coaſt upon hearing the news of our being in the bay.

25th. About ſeven in the morning the current was favourable, and we made ſeveral tacks in order to enter a narrower part of the channel, where we ranged very near to the weſt coaſt, ſteering N. E. N.

Having proceeded about 2,500 toiſes along this channel, we entered a ſecond bay upwards of 5,000 toiſes in length, and bounded to the weſt by pretty high grounds; the eaſtern coaſt, which ſeparates this ſtrait from Adventure-bay, was leſs elevated.

About half an hour after one in the afternoon, we caſt anchor at the diſtance of 500 toiſes from the ſhore; Cape Canelé bearing S. 33° E.

I went on ſhore to north-weſt, where I found the woods very full of thickets, and extremely damp, though no rain had fallen for ſeveral days. A new ſpecies of *ptelea* grew in great abundance amongſt the ſhrubs with which this country was covered.

26th. We weighed anchor about ſeven in the morning, and found ourſelves, at noon, in a third bay, where the great number of openings in the land left us for ſome time doubtful what courſe we ſhould ſteer, in order to get out of it, which we a length accompliſhed, to north-weſt, by the moſt diſtant of the openings. The depth of water in this bay was not leſs than eleven fathoms about the middle, and at leaſt ſix and a half at the diſtance of a hundred toiſes from the ſhore.

Having proceeded almoſt 10,000 toiſes to N. N. W. we anchored about half an hour after three in the afternoon, in a depth of fourteen fathoms and a half, with a muddy bottom. As it was probable that, in caſe the wind ſhould become favourable, we might proceed on our courſe before night; none of us went on ſhore.

On the 27th, about eight o'clock in the morning, we weighed anchor. The current ſoon ſet againſt us, and obliged us to caſt anchor at the depth of twelve fathoms and a half, in a bottom of ſand mixed with mud. We were then in 43° 4′ S. lat. 145° 17′ E. long.

At the diſtance of two thouſand five hundred toiſes to north-eaſt, the fartheſt end of the ſtrait through which we were to paſs, was viſible.

A fire at a ſmall diſtance from the ſhore appriſed us of the natives being near. We ſoon after obſerved one of them walking along the ſhore.

Two boats were ſent out to tranſport ſome of our men to both ſhores of the ſtraits. They diſcovered a number of the ſavages landing from a raft on the eaſt ſhore. As timid as thoſe we had ſeen before, they had haſtened with all poſſible ſpeed to the land, where they made their eſcape into the woods, leaving behind them ſeveral darts of a very clumſy conſtruction.

I went on ſhore at the place where the ſavages had diſappeared, and found ſeveral pieces of very beautiful hard granite, rounded by the water.

We found four rafts, made of the bark of trees, on the beach. Theſe rafts are only fit for croſſing the water when the ſea is very tranquil; otherwiſe they would ſoon be broken aſunder by the force of the waves. As the ſavages poſſeſs the art of hollowing the trunks of trees by means of fire, they might employ the ſame method to make themſelves canoes; but the art of navigation has made as little progreſs amongſt them as the reſt.

Having arrived at the extremity of the ſtrait, I found ſome fine cryſtals of feld-ſpath in ſeveral rocks of very hard ſand ſtone.

On the tops of the hills I met with the plant deſcribed by Phillips, in his account of his voyage to Botany-bay, under the name of the yellow gum-tree. As it was already in ſeed, I had no opportunity of examining the characters requiſite for determining its genus. To me it appears to belong to that of *dracæna*. The grains were contained in long ears, filled with a vaſt number of larvæ, which are afterwards metamorphoſed into ſmall phalenæ of the moth kind.

The gum-reſin which flows from this plant is very aſtringent, and might, no doubt, be uſed with advantage in medicine. The gummy principle with which it abounds, renders it more apt to mix with the fluids of the human body, and ought to give it a preference before many other aſtringents that are employed.

Amongſt a variety of other beautiful plants, I found a very remarkable one of the compoſite tribe, which had never before been diſcovered. It conſtitutes a new genus, which I named *richea*, after Citizen Riche, one of the naturaliſts to our expedition. This philoſopher fell a victim to his love for ſcience, having made, when already in a very advanced ſtage of conſumption, a long and fatiguing journey, in which he had more conſulted his ſcientific zeal than the ſtate of his health.

This new genus naturally ranks in the third ſection of the cynarocephales. (Juſs. gen. plant.)

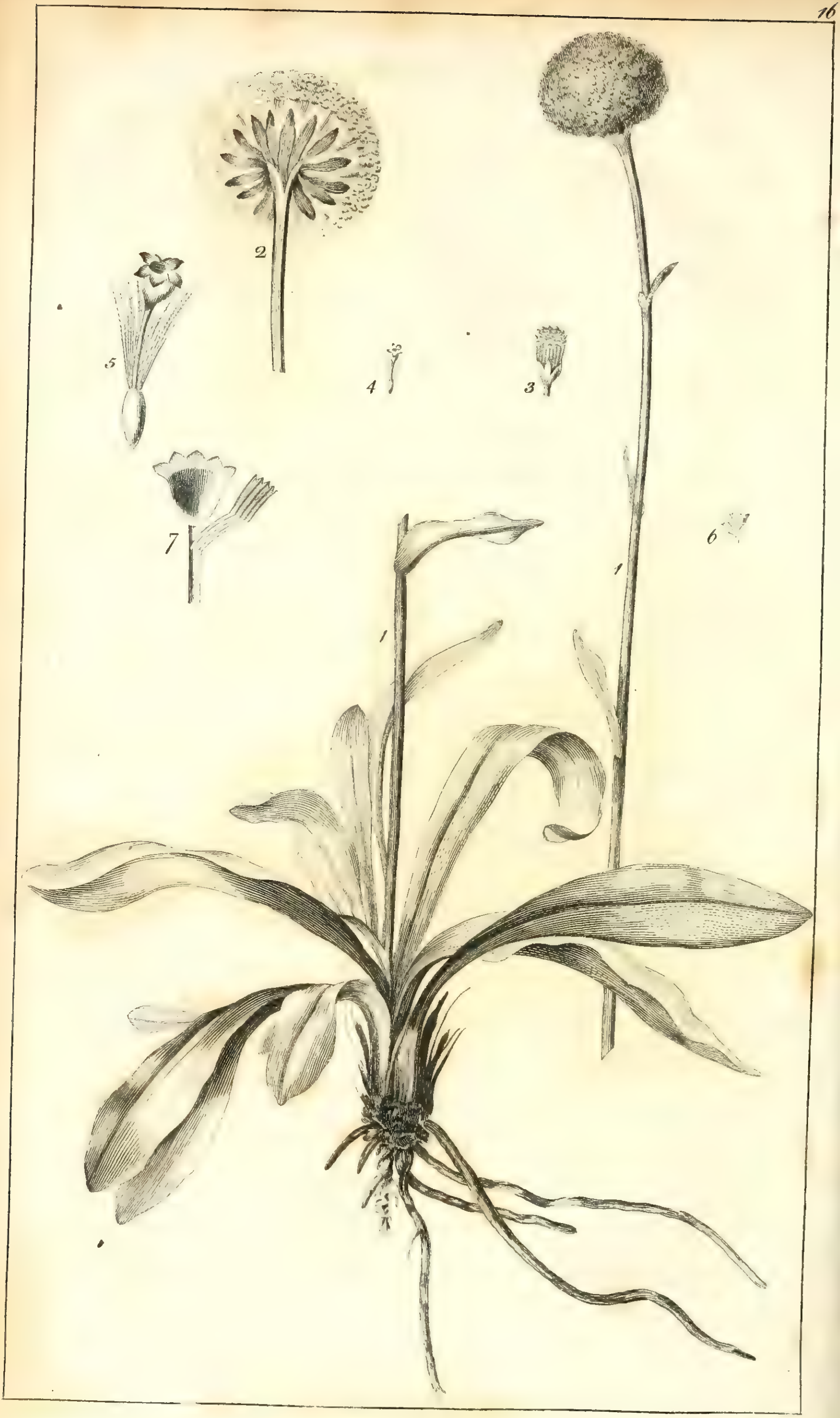
The common calix is compoſed of ſeveral obtuſe foliolæ, ſcarious at their extremities, of equal length, and diſpoſed in a ſingle row; it incloſes ſeveral diſtinct calices, each of which is ſupported by a very ſhort peduncle. Each of the ſmall calices is compoſed of five or ſix foliolæ, and contains five or ſix floriolæ, all hermaphrodite, and provided with ſheaths of nearly the ſame length with themſelves.

The floriolæ are inflated at their ſuperior extremity, and divided into five equal diviſions.

Five diſtinct filaments, attached to the inſide of the corolla, ſupport the ſame number of antheræ, united in the form of a cylinder.

The ſtyle is filiform, and of an equal height with the ſtamina. The ſtigma is bipartite.

The



Richea Glauca.

Pub.d by I. Stockdale. Piccadilly. 15th April, 1800.

The ſeed is oval, covered with a light down, and has at the top twelve or fourteen hairy tufts.

On account of the colour of the leaves of this plant I have called it *richea glauca*. The flower is of a brimſtone-yellow colour.

Explanation of the Figures in Plate XVI.

Fig. 1. The plant.

Fig. 2. The flower ſeen from behind, ſo as to diſtinguiſh the common calix.

Fig. 3. One of the ſmall calices, with its floriola.

Fig. 4. One of the floriola with its ſeed.

Fig. 5. The ſame ſeen through a magnifying glaſs.

Fig. 6. Floriola, divided longitudinally, to ſhew the ſtamina.

Fig. 7. The ſame ſeen through a magnifying glaſs.

One of the officers of the Recherche, following a beaten path made by the ſavages through the woods, met ſix of them walking ſlowly towards the ſouth, who were all ſtark-naked, and armed with javelins ſixteen or eighteen feet in length. Their ſurpriſe at ſo unexpected a rencounter was viſible in their countenances; but their number inſpiring them with courage, they approached at the invitations of the European, and bound round their heads a handkerchief and neck-cloth which he offered them. They, however, appeared terrified at the ſight of his hanger, which he ſhewed them how to uſe; nor were their fears quieted till he made them a preſent of it. He endeavoured in vain to perſuade them to come to the place where our ſhips lay at anchor: the ſavages walked away, following the ſame path in a direction oppoſite to that which led to the ſhore.

Some of our men having landed on the other ſide of the ſtrait, came to a large fire, round which eight ſavages, each of whom had a kangarou ſkin wrapped round his ſhoulders, ſat warming themſelves under the ſhelter of four fences againſt the wind. They immediately ran away as ſoon as they ſaw our people.

An old woman who had the care of their proviſions, which ſhe did not chooſe to leave behind her, was ſoon overtaken by ſome of the ſailors. She accepted with an air of ſatisfaction, an handkerchief that was given her, but was ſo terrified at the ſight of a hanger, which they preſented to her, that ſhe leapt down a precipice more than forty feet in height, and ran away amongſt the rocks, where they ſoon loſt ſight of her.

I do not know whether thoſe who related this adventure in a different manner, wiſhed to make themſelves merry at the expence of the reſt, when they aſſerted that the age of this woman was no ſecurity for her againſt the attempts of ſome of the ſailors: however, ſhe was ſtill young enough to make her eſcape, leaving behind her two baſkets, in which were found a lobſter, ſome muſcles, and a few roots of a fern, which I recogniſed to belong to a new ſpecies of *pteris*, of which I had before collected a conſiderable quantity. Probably the ſavages chew theſe roots, in order to expreſs the nutritious juice, which always abounds more or leſs in plants of this ſpecies.

This woman, like the other ſavages, had the ſkin of a kangarou wrapped about her ſhoulders: ſhe had likewiſe another of theſe ſkins bound round her waiſt in the form of an apron. I ſuppoſe that ſhe had provided herſelf with this piece of clothing, more on account of the inclemency of the ſeaſon, than from a principle of modeſty; for thoſe of the ſavage women who were ſeen at Adventure-bay by Captain Cook, at a diſtance of not many hundred toiſes from this place, were ſtark naked: and it is not probable that there ſhould be much difference of manners between the natives of two countries ſo near to each other.

28th. A wind from the north blew in ſuch violent ſqualls during the night, that the Eſperance was ſet adrift, though ſhe held by a very large anchor.

We had ſpent more time in ſurveying the ſtrait of Dentrecaſteaux than we had intended. Before we could reach the main ſea we had ſtill a paſſage of 2,500 toiſes to make through the channel. The wind was contrary, but the tide favourable; ſo that we got under way about half an hour after nine in the morning. We often came within 150 toiſes of the coaſt, where the ſoundings gave us our depth at 12 or 15 fathoms, in places where the coaſt was high, and 6 or 6½ fathoms near the low grounds.

At length we reached the extremity of the ſtrait. The two forelands are at the diſtance of 2,500 toiſes from one another from S. E. to N. W. We ranged very near to that on our ſtarboard ſide, where we found the depth to be no more than 3½ or 4 fathoms. Such a great diminution of water at the termination of the ſtrait, led us to conjecture that the bottom conſiſted of a hard rock that reſiſted the daily action of the tides, and the ſoundings verified our ſuppoſition. This was the only bad bottom which we found throughout the whole extent of the ſtrait. We left it about noon; when we diſcovered an opening E. S. E. about 15,000 toiſes in breadth, which affords a paſſage into the main ſea.

To the northward we obſerved a vaſt bay, or rather a gulph, intercepted with iſlands, and connected with the main land, which we ſaw at a diſtance. Several bights in the land that incloſes the gulph, ſeemed likely to afford good anchorage.

CHAP. VI.

Importance of the Strait of Dentrecaſteaux—Run from Cape Diemen to New Caledonia—Coaſting the South Weſt of New Caledonia—Dangerous Situation of the Recherche near the Reefs on that Coaſt—Little Cluſter of Iſlands at the Northern Extremity of New Caledonia—View of the Natives—Prodigious Extent of the Reefs—View of the Land of the Arſacides, and of the Treaſury Iſlands—Coaſting the Weſtern Part of the Iſlands of Bougainville, and Bouka—Dangerous Situation of the Recherche, on the Shoals off the Iſland of Bougainville—Interview with the Savages of Bouka Iſland—Their Taſte for Muſic—Their Treachery—Their Canoes—Determination of ſeveral Points of Bougainville and Bouka Iſlands—Anchor in Carteret Harbour—Several Excurſions on the neighbouring Land—Inceſſant Rain during our Stay at Carteret Harbour—Different Obſervations.

WE had now compleated a geographical diſcovery of great importance to navigation. It was a point of the greateſt utility to know exactly the harbours in which ſhips might find ſhelter from the heavy gales and impetuous ſtorms, which prevail at this extremity of New Holland. A road, which is not leſs than 22,000 toiſes in extent, in that particular ſituation, might preſent great advantages to a commercial nation. Throughout the whole road, a ſhip may caſt anchor with the certainty of finding a good bottom, the depth being from 6 to 25 fathoms, and no danger to be dreaded. At an equal diſtance between its two extremities, the bottom is of coarſe ſand, and not ſo good. There is alſo leſs water, as the depth there does not exceed ſix fathoms. It ſhould ſeem that the tide entering at once by both extremities had accumulated the ſand, at the place where the oppoſite currents meet. A ſhip may, without danger, come within 100 toiſes of the land. The ſinuoſities of the land preſent a varied proſpect, and ſituations truly pictureſque.

The ſeaſon was advanced and the thermometer had not yet been lower than 7° above 0, although we were near the 44th degree of S. lat. Impetuous winds reigned in the open ſea, while in the ſtrait, we enjoyed the greateſt tranquillity. We did not expect to experience ſo much ſecurity near the Bay of Tempeſts.

Fiſhes which prefer tranquil waters, abound in this channel, and we were generally very fortunate in catching them.

Scarcely had we paſſed the ſtrait, to the diſtance of 1,500 toiſes when we could no longer diſtinguiſh the opening. The depth increaſed, as we advanced into the open ſea.

At noon, our latitude was 43° 1′ S. and our longitude 145° 19′ E.

We were not long in doubling Cape Pillar, and we immediately ſteered a north-eaſt courſe, in order that we might explore the ſouth-weſt coaſt of New Caledonia.

The mercury in the barometer ſunk into 27 inches 8 lines, and we had a violent gale from the N. W. The motion of the ſhip was to me as ſickening as at our departure from Breſt. During our ſtay at Cape Diemen, I had completely forgotten my ſailing habits.

On the 30th of May we had made great progreſs; for at noon, our latitude was 40° 55′ S. and our longitude 150° 4′ E.

The Mercury in the barometer had fallen to 27 inches 4 lines, and had not deceived us in announcing impetuous winds. We could only ſcud under our fore-ſail, which at laſt we were obliged to ſtrike, but fortunately we had the wind aſtern.

Although the thermometer was not lower than

9° 2-10ths above 0, the cold was nevertheleſs great. The violent agitation of the air appeared to me the principal cauſe of the ſenſation which we experienced.

On the firſt of June, having arrived in latitude 37° 17′ S. and longitude 154° 5′ E., we ſaw a great number of ſpeckled petrels *(procellaria capenſis)* and many albatroſſes remarkable for the red extremities of their wings.

2d. The next day many flying fiſhes, of the ſame ſpecies with thoſe which we had ſo often met with elſewhere, falling on board of us, announced our arrival in parts of the ſea frequented by bonitoes.

The motion of the ſhip, ſince our departure, had made me ſo faint, that I found myſelf abſolutely incapable of taking the meaſures neceſſary for the preſervation of the objects which I had collected in my laſt excurſions.

3d. But this day the ſea became more calm, and allowed me to enter upon that buſineſs. My ſpecimens had ſuffered no damage; only I found them ſlightly covered with moiſture.

5th. Since our departure from New Holland, we had been reduced to ſhort allowance of water; and the heat, which now began to be very ſenſibly felt, rendered that privation the more painful. We were allowed but a bottle in the day;

although our want of it increaſed as we approached the Torrid Zone. For this beverage we could not ſubſtitute wine, which became daily worſe, and brandy, which many preferred to wine, rendered a greater quantity of water neceſſary. Salted proviſions increaſed a thirſt, which we had not the means of quenching, and the great quantity of ſea-ſalt introduced into our fluids, had communicated to them a great degree of acrimony. Thus the privation of freſh water is one of the principal cauſes of the diſeaſes of ſeamen.

Spotted petrels and many other birds which we ſaw on the 6th of June, in latitude 34° 47′S., and longitude 159° 21′ E., made us ſuppoſe that we were approaching ſome iſland, ſtill too diſtant to be ſeen.

11th. About the middle of this day, we thought we ſaw land at eaſt. After ſteering in that direction for an hour, the phantom diſappeared, and we reſumed our courſe.

15th. We ſhot a man-of-war bird, which was hovering over the ſhip. This bird had in its bill one of the ſpecies of cuttle fiſh called *ſepia loligo*. It had probably caught this molluſca, the inſtant before it received the fatal ſtroke. In the Mediterranean, I have ſeen this ſpecies of cuttle fiſh raiſe itſelf many feet above the ſurface of the water, by means of membranous expanſions, ſituated laterally near its lower extremity: ſome of them even dropped on board of us.

16th. About half an hour paſt five in the morning, we entered the Torrid Zone, in 65° of E. longitude.

About eight we ſaw the Iſle of Pines, which is at a little diſtance from the ſouthern point of New Caledonia. It had the appearance of a peak of moderate elevation; and we ſoon had a view of the low lands, with which it is every where ſurrounded. We diſtinguiſhed large trees, towards the ſouth-eaſt part of the iſland. Its poſition, which we determined, is in S. lat. 22° 42′, and E. long. 165° 14′, which is but 4′ leſs in lat. and 4′ more in long. than its poſition, as aſſigned by Captain Cook.

About five in the evening, we had ſight of New Caledonia in the N. W., diſtant above twenty thouſand toiſes, and we ſteered towards it; but about ſun-ſet, we were obliged to lay to for the Eſperance, which always ſailed much worſe than our ſhip. We then had a view of the coaſt, from 32° to the northward of weſt, to 32° to the weſtward of north; but we were ſtill too far diſtant to ſee the reefs, between that iſland and the Iſle of Pines. The Eſperance joined us about eight at night. It was proper for us to make many tacks during the night, but it was ſo calm that the ſhip did not obey her helm.

A ſouth-weſt wind brought us near New Caledonia; although we expected to meet with the winds, which generally prevailed ſeveral days before we made the land.

The ſmall change of variation which the compaſs had undergone, during the tranſit which we had made, is very well worthy of remark. We may look upon it as nothing, from ſouth latitude 36° 30′, and eaſt longitude 154°, where the variation was 11° 30′ eaſt, to ſouth latitude 23°, and eaſt longitude 164° 30′, where the variation was 11° 4′; for in this run of 13° 30′ of latitude, and 10° 30′ of longitude, the compaſs did not vary a degree; and it is well known that, at ſea, the variation cannot be obſerved nearer than within a degree of the truth.

17th. A fire kindled by the ſavages, on the Iſle of Pines, was ſeen during the night.

At break of day, we obſerved immenſe reefs on the coaſt of New Caledonia, ſtretching firſt towards the ſouth, and then towards the weſt. The calm confined us, the whole morning, between thoſe dangerous rocks and the Iſle of Pines; but in the afternoon, a ſlight breeze from the

ſouth-

ſouth-weſt, enabled us to keep clear of the breakers.

At noon, our latitude was 22° 49′ S., and our longitude 164° 40′ E.; the ſouthern point of New Caledonia then bearing N. N. E., diſtant about 20,000 toiſes. This extremity of that iſland is in 22° 30′ S. lat. and 164° 30′ E. longitude.

18th. We had loſt ſight of the chain of reefs, but about eleven o'clock we perceived their ſouthern extremity, at the diſtance of about 10,000 toiſes N. W. ¼ W. Their ſmall diſtance from our ſhip at noon, when we obſerved our latitude, convinced us that they extended ſome minutes farther to the ſouthward than Captain Cook believed; for we ſaw that they reached 23° of S. lat., and 164° 31′ of E. longitude.

Thoſe reefs, to which we approached nearer than the diſtance of 1,000 toiſes, are nearly 20,000 toiſes from the coaſt, and in that ſpace keep the ſea very tranquil: we were obliged to make ſeveral tacks in order to get out of it.

19th. We made little way in the morning of this day; for at noon, in 23° 3′ 48″ of S. lat., and 164° 8′ 20″ of E. long. we were ſtill in ſight of the weſtern extremity of the reefs, which bore N. W. ¼ N. at the diſtance of about 10,000 toiſes. We brought the Cape to bear N. W. ¼ W. in order to double it, and to approach near the coaſt.

We kept tacking, chiefly under our top-ſails, during the whole night, endeavouring to keep company with our conſort. It was neceſſary that we ſhould be able, mutually, to communicate the dangers to which we might be expoſed, on a coaſt bordered with ſhelves and rocks, hitherto unexplored by navigators.

20th. During the night, the currents brought us back to the reefs which we believed we had doubled. We ſtood towards the land, when daylight fortunately ſhowed us all the danger of our ſituation. We were ſurrounded with reefs, and had but little room to beat about. The wind at ſouth-ſouth-eaſt, freſhened and increaſed the waves, which were carrying us towards the breakers; and we were in the midſt of the danger, when the Eſperance pointed it out to us by a ſignal. Roſſel then commanded on the quarter-deck. Immediately we trimmed up the ſails on the ſtarboard tack, in order to extricate her from this dangerous poſition. The Eſperance had ſucceeded in this manœuvre, and we had the pleaſure to ſee her clear of the danger, and ſtanding towards the weſt.

Our bell was now rung to ſummon all hands on deck, in order to be more ſure of ſucceſs. Four times did Roſſel fail in his manœuvre, and every attempt did but bring us nearer to the danger. We were driving towards the reefs, where the waves, ready to ingulph us, roſe to a prodigious height. We could not caſt anchor; for no bottom was to be found with fifty fathoms of line, although we were cloſe to the rocks. Each of us was looking eagerly for the means of eſcaping death, which ſeemed almoſt inevitable. At laſt the ſhip touched, when, by unexpected good fortune, the fifth attempt ſucceeded, and we had the unſpeakable ſatisfaction of ſeeing the ſhip remove from the danger.

Between the reefs and the land were ſome little iſlands, diſtant above 5,000 toiſes from the coaſt.

The land of New Caledonia, which was low towards its ſouthern extremity, now began to riſe into mountains of moderate elevation, in a ſouth-eaſt and north-weſt direction, inclining a little farther towards the north.

When, at the approach of night, we were going about, the top-men had forgotten to change the booms of the main-yard, and the mizen top-ſail yard; and they were both broken, the moment we went upon the other tack. The firſt fell over-board; but the other, in its fall, wounded three people, among whom was the Commander of the expedition.

21ſt. We ſtood out to ſea, and there remained during the night, and in the morning we ſteered for the land. A wind at ſouth-eaſt carried us to the north-weſt, at the diſtance of ſeven hundred toiſes, from the reefs, which deny all acceſs to the ſhore, whence they are diſtant by about 2,500 toiſes. We expected to find ſome opening which would allow us to anchor under the ſhelter of this barrier, againſt which the waves daſhed in a dreadful manner.

A conſiderable body of ſmoke which roſe at the foot of the hill, at a little diſtance from the ſhore, indicated the preſence of the natives.

From noon, when we found the latitude 22° 6′ 58″ ſouth, and the longitude 163° 34′ 36″ eaſt, we had proceeded nearly 10,000 toiſes to the north-weſt, when we obſerved, between two reefs a large opening, which ſeemed likely to afford us an entrance to an anchoring place near the ſhore. But unfortunately the day was too far gone, and the ſea too much agitated, to allow us to ſend a boat to ſound this entrance. We regretted much that we were precluded from enjoying the calm which prevailed behind this rampart, againſt which the waves made unavailing efforts.

Hills, almoſt wholly denuded of vegetation, roſe like an amphitheatre towards the principal chain of mountains, which appeared to be, at leaſt, nine hundred toiſes in perpendicular height, and their direction ſtill towards the north-weſt. We there found three ranges of mountains of different degrees of elevation, and we obſerved hollows, apparently formed by the fall of the rains, and which were continued to the ſummits of the moſt arid mountains.

Behind thoſe high mountains, we ſaw perhaps 20,000 toiſes within the land, which towered above all the reſt, and appeared to be, at leaſt, 1,200 toiſes in perpendicular elevation.

From the middle of one of thoſe ravines, or hollows, iſſued a torrent which we diſtinguiſhed perfectly by the whiteneſs of its foaming waters; although we were very diſtant from it.

The cold on thoſe heights, undoubtedly render it neceſſary for the natives to warm themſelves. We ſaw many large fires, which they had kindled, while we beat about the offing in the night.

22d. On account of the faintneſs of the breeze, we could not make the reefs till noon, when we found ourſelves in 21° 51′ ſouth lat. and 163° 8′ eaſt long. We ſteered along the reefs till night, without finding the leaſt opening.

New Caledonia preſents a more charming appearance than the old country of that name: for we ſaw ſome trees growing in the bottoms of the ravines with which thoſe hills are furrowed.

A fire kindled on ſhore, indicated that thoſe arid tracts of land are not wholly deſtitute of inhabitants.

habitants. It was not long before we ſaw ſome of them.

The wind having varied from the north-eaſt to the north and north-weſt, we brought to, about ten at night. This was not, perhaps, the moſt prudent manœuvre in our ſituation; for when danger is near, we ſhould always be prepared to avoid it. It would certainly have been preferable to have kept tacking, in order that we might be able to manœuvre conveniently, in caſe any troubleſome incidents had occurred.

23d. We were baffled by the winds all night, and at noon, were only in lat. 21° 37′ S., and long. 162° 47′ E.

We ſaw ſome mountains which were covered with trees to the ſummits.

The fires which we obſerved near the ſhore, indicated a great concourſe of ſavages. They were probably brought together by the appearance of our ſhip, which was detained by contrary winds, almoſt in the ſame place.

About three o'clock, being about the diſtance of 35,000 toiſes from the land, we obſerved, near the beach, a group of twelve Caledonians, whoſe looks were directed towards us, and who ſeemed to be aſtoniſhed at ſeeing our ſhip, at ſo ſmall a diſtance from their iſland.

Three natives who formed another group, ſtood very near two fires, which they had kindled.

By the help of a good ſpy-glaſs, we ſaw that they were entirely naked. They did not ſeem inclined to come off to us in their canoes. Beſides, the reefs rendered it impoſſible for them to reach our ſhip.

24th. A ſtrong breeze at ſouth-weſt obliged us to tack; and we found ourſelves almoſt at the ſame place as on the preceding day. The land was covered with a fog, which had always accompanied ſouth-weſt winds.

We found the ſhip to be in 21° 46′ of ſouth latitude, and 162° 46′ of eaſt longitude, when we thought we ſaw between the reefs an opening which might afford us a paſſage; but how could we aſcertain that fact, when the wind was blowing ſo ſtrong a gale?

25th. As ſoon as the wind ſhifted to the ſouth, the fog was entirely diſſipated. The winds which brought the cold into thoſe latitudes, forced the air, when the ſun was withdrawn, to part with the redundant water, which it had held in ſolution during the day. Hence ſome large drops of very cold water then fell, at a great diſtance from each other.

For the two laſt days, we had made no conſiderable advances, in exploring the coaſt, where we had ſeen many fires, kindled perhaps by the ſame natives as on the preceding days.

26th, 27th, 28th. We had alſo to ſtruggle with contrary winds, during the two ſucceeding days; but, on the 28th, a freſh breeze at ſouth-eaſt, favoured our views in ſtretching along the coaſt. The high mountains, which we had hitherto ſeen, were exchanged for ſome of a much lower elevation, and at laſt we thought we had reached the end of the chain; but farther on, they reſumed nearly the ſame height, and we ſaw the northern extremity of the iſland, formed of lofty mountains, which, at that diſtance, did not appear to differ from thoſe which we had obſerved on the preceding days.

At noon, our latitude was 20° 28′ ſouth, and our longitude 161° 29′ eaſt, and we were not backward in obſerving, that near the extremity of the iſland, the chain of reefs was interrupted, and preſented a large opening, which ſeemed likely to afford us an anchoring place; but the wind blew too ſtrong to allow us to put out a boat, in order to take the ſoundings in this opening. We lay to all night, in hopes that the weather would be more favourable the next day.

In the direction of the land of New Caledonia, we obſerved ſeveral iſlands ſurrounded with reefs, and connected together by ſand banks and other ſhoals.

29th. During the night, the wind had made us fall off ſo much, that we loſt ſight of the northern extremity of New Caledonia, which we found to be in 19° 58′ ſouth latitude, and 161° 10′ eaſt longitude. That iſland preſents a chain of mountains, extending about eighty nautical leagues, from the ſouth-eaſt to the north-weſt. Its mean breadth is not more than ſeven or eight leagues. Captain Cook, who diſcovered it in 1772, only ſaw the north-eaſt part of it. The examination of the ſouth-weſt coaſt of the iſland was an important object in navigation. The reefs by which it is bordered, are generally from 25 to 30,000 toiſes diſtant from the land, and towards their extremities this diſtance is greater, but they are not ſo broad. That coaſt, extremely dangerous at all times, is rendered ſtill more ſo by the ſouth-weſt winds, which were remarkably adverſe to us, in exploring it.

The ſmall number of fires which we obſerved, and the apparent ſterility of the land, gave me good reaſon to believe that the iſland was but thinly inhabited.

We did not ſee a ſingle canoe, although they might have been managed with facility, under the ſhelter of the reefs, where the ſea is extremely tranquil.

About ſeven o'clock in the morning, we came in ſight of many mountainous iſlands and detached rocks, ſtretching from N. N. E. to E. N. E. and which render this extremity of New Caledonia ſtill more dangerous than the ſouthern part. Some of thoſe iſlands are ſeveral hundred toiſes in extent. The points of a great number of black rocks were elevated above the water. Thoſe rocks, ſurrounded by water ſlightly agitated, ſeemed themſelves to be in motion, and, at firſt ſight, we took them for canoes, floating on the ſurface. We ſoon diſcovered that thoſe little iſlands were numerous; for they extended as far as we could ſee from the maſt head. They are encircled with reefs, amidſt which the ſea aſſumes the colour of the reddiſh ſand which compoſes its bottom. We had a near view of them; for, about eleven o'clock, we were but about 1,500 toiſes to the ſouthward of one of thoſe little iſlands, when we obſerved reefs extending from its weſtern point, in the direction of W. N. W. as far as the eye could reach.

At the place, where we found our latitude at noon to be 20° 6′ 4″ ſouth, our longitude being

161° 10′ 36″ eaſt, we had on the eaſt 22° north, a little iſland, diſtant 1,000 toiſes.

Another iſland bore from us north 80 degrees weſt, at the diſtance of about 8,000 toiſes. Thoſe two iſlands were connected together by reefs.

We ſaw other lands, bearing north 28° eaſt.

A fire, on the little iſland neareſt us, not far from a rivulet deſcending from a mountain, indicated that thoſe little ſpots of land were frequented by the natives.

The ſtrong guſts of wind which blew in the night, would have greatly embarraſſed us in any other ſituation; but, under ſhelter of the iſlands and reefs, it was eaſy for us to beat about during the night.

June 30. Some little iſlands towards the eaſt, ſeemed to terminate this little archipelago. Their elevation gradually diminiſhed, in proportion to their diſtance from New Caledonia. They ſeemed indeed to be only a continuation of the mountains of that large iſland; their baſes being covered by the ſea, and their ſummits riſing above it, and forming ſo many little iſlands. The gradual diminution of the height of thoſe mountains, makes it reaſonable to ſuppoſe that in thoſe ſeas, ſhoals extending to a great diſtance, contribute to augment the dangers of navigation. In the ſequel,

quel, we ſhall ſee that this ſuppoſition is by no means deſtitute of foundation.

We directed our courſe to the north-weſt, very near the reefs, which precluded our acceſs to the little iſlands.

The Commander informed the captain of the Eſperance, that in caſe of ſeparation, the two ſhips ſhould rendezvous at port Pralin or Carteret harbour.

Our latitude at noon was 19° 28′ 10″ ſouth, and our longitude 160° 36′ 12″ eaſt; the moſt northerly of the little iſlands bearing eaſt, at the diſtance of 8,000 toiſes.

We came in ſight of a chain of reefs, which extended as far as the eye could reach, towards N. W. ½ N. in ſome places forming bights, by taking a weſterly direction. With the wind at E. S. E. it was eaſy for us to follow all the windings of thoſe reefs. In the afternoon, we ſteered parallel to them for nearly 20,000 toiſes and then thought that we ſaw their extremity. We were already felicitating ourſelves with having terminated this dangerous and troubleſome navigation, and entering into an open ſea, when the watch announced ſhoals and a ſucceſſion of reefs, in the direction of N. N. W. It was now too late in the day to intangle ourſelves among them, and we worked to windward during the night.

A booby, of the ſpecies *pelecanus varius,* allowed itſelf to be caught about ſun-ſet. It differed from the ordinary ſpecies, by having a lighter colour. This bird came, without diſtruſt, and ſat down on the round top, beſide one of the ſailors. The ſpecies is remarkable for being but little afraid of man: they will even frequently light on one's arm, when preſented to them. Their ſenſe of ſmelling muſt not be very ſubtile; for their noſtrils conſiſt of but two ſlight chinks in the upper mandible, which is moveable like that of the parrot.

JULY 1ſt. We now believed that we had compleated the ſurvey of this frightful chain of reefs, which obſtructs the ſea for near 100 marine leagues from the S. E. to the N. W.; and we were 10,000 toiſes to the northward of them, about noon, when we found ourſelves in 18° 50′ of ſouth latitude, and 160° 32′ of eaſt longitude.

We next ſteered towards the N. N. E. in order to aſcertain whether or not thoſe reefs extended to the north-eaſt.

One of the crew, called Moulin, about two o'clock in the afternoon, diſcovered to the northward, at the diſtance of 10,000 toiſes, a little low iſland covered with very tufted trees, and bordered towards its weſtern ſide, with reefs, extending towards W. N. W. This iſland, which is not above 2,500 toiſes in circumference, is ſituated in 18° 31′ 10″ of ſouth latitude, and in 160° 32′ 14″ of eaſt longitude.

Agreeable to the promiſe of the General, this iſland was called Moulin's Iſland, after the man who firſt obſerved it.

About four o'clock two other little iſlands were deſcried towards N. W. ¼ N. diſtant about 8,000 toiſes. As it was impoſſible for us to paſs thoſe iſlands before night, at five o'clock we directed our courſe to the S. S. E. and we kept the ſhip's head that way till the morning.

We were ſurrounded during the night with flocks of birds, which inhabited thoſe low iſlands. Notwithſtanding the darkneſs, the man-of-war birds came and hovered over our ſhip, and ſeveral boobies alighted upon our yards.

2d. The Commander had intended to anchor under the ſhelter of Moulin's Iſland; but we found ourſelves carried above 5,000 toiſes to leeward, and it would have been extremely difficult to work up to windward againſt both wind and current. We therefore ſteered N. N. E. and it was not long till we obſerved, towards the north, breakers not far from the two little iſlands, which we had obſerved the preceding day. We ſteered parallel to them, at the diſtance of about 1,000 toiſes and in their direction, which was towards the north-weſt.

From the point where we obſerved our latitude at noon, which was 18° 7′ 46″ ſouth, our longitude being 166° 32′ eaſt, we ſaw the neareſt reefs, at the diſtance of near 10,000 toiſes to the eaſtward. We continued to ſteer along them, in the direction of N. W. $\frac{1}{4}$ N.

About a quarter paſt one o'clock, we diſcovered, at the diſtance of nearly 8,000 toiſes towards the eaſt, a low and very woody iſland, which appeared to us to be at the leaſt 8,000 toiſes in circumference; and it was ſurrounded with rocks almoſt level with the water. Having the wind againſt us, we ſteered very near it: the breakers extended towards the north-eaſt to the eſtimated diſtance of about 8,000 toiſes, and in the midſt of thoſe reefs, we ſaw black pointed rocks, ſimilar to thoſe which we had obſerved before.

This new iſland is in latitude 18° 3′ ſouth, and in longitude 160° 31′ eaſt.

We ſteered towards the north, and about four in the afternoon, we had the laſt of thoſe rocks to the eaſtward of us, at the eſtimated diſtance of 8,000 toiſes. There thoſe reefs ſeemed to terminate; appearing to extend towards the eaſt, and then towards the ſouth. Their northern extremity is in 17° 54′ of ſouth latitude, and 160° 30′ of eaſt longitude, and about ten leagues to the north of Moulin's Iſland.

It was eaſy for us to perceive, by the force of the waves, that we were diſengaged from the reefs.

A great number of tropical birds, boobies and man-of-war birds, quitting their retreats in the different little iſlands, came and played in airy circles about the ſhip, almoſt the whole day. We ſaw the trunks of ſeveral cocoa-nut trees floating, which had been torn by the waves from the place of their growth.

About ſix in the evening, the lead indicated fifty-eight fathoms depth of water, with a bottom of fine ſand, our latitude having then been 17° 51′ ſouth, and our longitude, 160° 18′ eaſt. We remained an hour upon that bank, where we hove the lead ſeveral times, and had from fifty to ſixty-ſix fathoms in depth.

Thus we completed the diſcovery of a dreadful chain of reefs, ſo much the more dangerous towards the north, as they are wholly out of ſight of land. Although they appeared to us interrupted, to the northward of New Caledonia, it is probable, notwithſtanding what we obſerved, that they are re-united farther to the eaſtward.

Thoſe reefs, are well known to be the work of *polypi*; and the danger attending them is the more to be dreaded, as they form ſteep rocks covered by the water, and which can only be perceived at a ſmall diſtance. If a calm take place, and a ſhip be carried towards them by the currents, her loſs is almoſt inevitable. Vain would be the attempt to ſave her by the anchor, for it would not reach the bottom, even cloſe to thoſe walls of coral, which riſe perpendicularly from the depths of the ſea. Theſe works of the polypus, which, by continually increaſing, obſtruct more and more the bed of the ocean, may well be ſuppoſed dreadful to navigators; and many ſhoals which now allow a veſſel to paſs over them, will, at no very diſtant period, be converted into reefs extremely dangerous to ſhips.

The compaſs experienced but little variation, while we were cruizing along this immenſe chain of rocks; for at their ſouthern extremity, it was obſerved, to be 11° eaſterly, and it was diminiſhed only two degrees, when we had reached their northern extremity.

3d. The next day we ſteered N. N. W.; but we ſaw no more breakers.

7th. At half paſt nine P. M. the moon being elevated about 15° above the eaſtern part of the horizon, we obſerved, in the weſt, a lunar rainbow. It differed in nothing from the ſolar rainbow,

bow, except that its colours were not ſo vivid. This phœnomenon is much leſs frequent than might naturally be expected.

The allowance of water was very ſmall, which was a prodigious hardſhip in latitudes ſo near the Line; and we had not the means of procuring more; although we were provided with Doctor Poiſſonnier's apparatus for diſtilling ſea-water. This contrivance was of no uſe to us, as it required much more fuel than we could ſpare; for when water is ſcarce on board ſhip, wood is never abundant.

About ten o'clock A. M. we deſcried the Arſacides, which we made near Cape Nepean. Thoſe lands, diſcovered in 1767, by Captain Surville, in the ſervice of the former French Eaſt India Company, were ſince ſeen by Shortland, who, thinking he had made a new diſcovery, gave them the name of New Georgia.

Our latitude at noon was 8° 52′ ſouth, and our longitude 154° 38′ eaſt. The neareſt land then bore E. ¼ N. E. diſtant 15,000 toiſes.

9th. At half paſt four o'clock, we deſcried the rock called Eddy-ſtone, bearing north-weſt, diſtant about 8,000 toiſes. At a diſtance, we took it, as Shortland did, for a veſſel under ſail. The deception was the greater, as the colour of it is nearly that of the ſails of ſhips; but ſome ſhrubs adorned its upper part.

The lands of the Arſacides oppoſite to this rock, are ſteep and covered with large trees to their ſummits.

Several fires kindled on the mountains, indicated the preſence of the ſavages.

Our obſervations aſcertained the ſituation of Cape Nepean, to be 8° S. lat. and 154° 56′ 24″ E. long.

The Eddy-ſtone rock is in 8° S. lat. and 154° 5′ E. long. and conſequently more to the eaſtward of Cape Nepean than Shortland alledges.

We lay to from two o'clock in the morning till day-light.

10th. Early in the morning, we ſaw the Treaſury Iſlands, bearing N. W. $\frac{1}{4}$ N. diſtant 20,000 toiſes. They are ſituated 20 leagues to the north-weſt of the Eddy-ſtone.

About noon, we were diſtant about 2,500 toiſes from the weſtern point of the largeſt, and moſt weſterly iſland of that little group. It is in 7° 25′ 36″ S. lat. and 152° 56′ 34″ E. longitude.

Thoſe iſlands are five or ſix in number, and ſo near together, that at a diſtance, they appear to form but one iſland, as was believed by General Bougainville, who ſaw them to the weſtward, when paſſing through the channel to which he gave his name. The Eſperance only diſtinguiſhed three iſlands: we ſaw five diſtinctly, and, had we been nearer, we ſhould probably have ſeen more. The mountains which form thoſe iſlands, are of a moderate elevation, and almoſt every where covered with large trees. The little group occupies a ſpace about ten leagues in circuit; the eaſt and weſt points being extended into ſhoals.

After having ſailed round them, we ſteered N. N. E. in order to view the eaſtern part of the iſland of Bougainville. About five o'clock P. M. we were near its ſouthern extremity, where we eſpied a group of ten little iſlands, the largeſt of which extends from eaſt to weſt. Being covered with large ſpreading trees, interſperſed with palms, thoſe iſlands preſented an enchanting proſpect. Very near their ſouthern ſide, we obſerved among them ſome breakers, which rendered it dangerous to approach them.

Two canoes, in which we diſtinguiſhed a number of natives, were under ſail, and ſeemed to ſteer towards us; but they paſſed behind the little iſland neareſt us, and their rapid motion ſoon carried them out of our ſight. On the beach of the ſame little iſland, we ſaw a company of ten natives, near a canoe, which lay upon the ſand,

and which they did not attempt to launch, in order to viſit us. As night approached, it was neceſſary for us to go about, in order to get into the offing.

11th. A violent rain drenched us during the night, and was ſucceeded by a thick fog, which enveloped the land, and did not permit us to approach it, till ſome hours after ſun-riſe.

Some reefs, level with the water, and extending for ſome hundred toiſes, appeared about eleven o'clock, at the diſtance of 15,000 toiſes from the ſhore, which they warned us not to approach.

We ſaw the ſummits of the high mountains of Bougainville iſland piercing the clouds.

The land was again inveſted with a fog, and we were obliged to wait till the 13th before we could purſue our examination of the coaſt.

13th. We enjoyed the beautiful proſpect of the high mountains gently falling into extenſive plains, where however we obſerved no trace of cultivation. The whole ſcene was covered with trees, even to the higheſt elevations, which appeared to be at leaſt twelve hundred toiſes in perpendicular height, and to be diſtant above twenty thouſand toiſes from the ſhore.

Fires upon the hills announced the preſence of the natives.

About half-paſt eleven o'clock, we thought ourſelves in the greateſt ſecurity, when we found the ſhip in ſhoal water, which the watch had not perceived. It was ſo ſhallow, that we could eaſily diſtinguiſh the fiſhes upon the rocks, ſome points of which, higher than others, put us in dread of ſhipwreck every inſtant.

We were then in 4½ fathoms of water, and the boat, which immediately began to ſound different parts of the ſhoal, found only 3 fathoms at one of its extremities. The whole bottom was coral.

Thus we were involved in the moſt imminent dangers, being ſurrounded on all ſides with ſhoals, which threatened us with the immediate deſtruction of the ſhip.

Boats were diſpatched, to ſound the water over the rocks, on each ſide of us. The leaſt depth they diſcovered was 3 fathoms; ſo that, a ſlight agitation of the ſea in that place, might have made us touch the bottom, and loſe the ſhip.

Thoſe rocks, like the reefs of New Caledonia, are the work of polypi; like thoſe reefs they are built perpendicularly, and quite cloſe to them, no bottom can be found with one hundred fathoms of line. They riſe, like ſo many columns, from the bottom of the ſea, and their progreſſive augmentation daily increaſes the danger of navigating thoſe parts of the ocean.

At noon our lat. was 6° 13′ 11″ S. and our long. 152° 7′ 51″ E. We brought to, and remained there till two o'clock.

Several trunks of trees floated alongſide. On one of thoſe which the boats brought, we obſerved a very old notch, which ſhewed that the inhabitants of the neighbouring iſland are in poſſeſſion of inſtruments which cut very clean. Perhaps they ſtill retain ſome of the axes, which General Bougainville gave them.

We drove inſenſibly towards a ſhoal; but we ſaw it in good time and avoided it.

Though the watches were ordered to redouble their attention, we found ourſelves about half paſt three upon another ſhoal, which it was neceſſary for us to clear like the firſt, at the riſk of ſeeing the veſſel drive againſt the rocks. There was the ſame depth of water as before. The ſurge was rendered very ſtrong by this bank of coral.

Our poſition was the more dangerous, as night approached, and thoſe ſhoals being at ſome diſtance from the coaſt, gave us reaſon to apprehend that we ſhould meet with others ſtill farther off. How were we to avoid them, during the darkneſs of the night? We muſt truſt to chance the ſecurity of our ſhip. We brought to, till day light, the ſhip's head to the ſouth-weſt, and we frequently ſounded without finding any bottom.

14th. The Eſperance, about three o'clock in the morning, made ſignals, which produced a lively ſenſation on board of our ſhip. We believed that they indicated ſome danger; but they were merely intended to give us notice that ſhe had ſoundings, in forty-two fathoms. We ſtood off a little from the land, and at day-light ſteered cloſe along ſhore. The chain of mountains then began to ſubſide.

Some little iſlands, detached from Bougainville Iſland, were connected together by reefs, on which we ſaw the waves beating. But theſe were not the only dangers on that coaſt: ſunken rocks formed ſhoals, which followed the ſame direction. Thoſe coral banks were doubtleſs covered with fiſh; for we ſaw many ſea-birds hovering over them in queſt of their prey.

A canoe, manned by ſix natives, was behind the little iſlands the neareſt to our ſhip; but, as we were making great way, we very ſoon paſſed them.

That part of Bougainville Iſland which was now in ſight, ſeemed to be much more populous than what we had hitherto ſeen. The fine plantations of cocoa-nut trees which bordered the coaſt, left us no room to doubt that the population was very conſiderable.

At noon, in latitude 5° 43′ 12″ ſouth, and longitude 152° 3′ 26″ eaſt, we ſaw Bougainville Iſland, forming, with the little adjoining iſlands, a bay not leſs than 15,000 toiſes in extent. The General intended to anchor there; but ſhoals obſerved in different points of its entrance, and a ſand-bank near its farther extremity, made him change his reſolution.

Bougainville Iſland terminates in very low lands, and we ſoon had ſight of the narrow channel which ſeparates it from Bouka Iſland.

After ſtanding off, we lay to all night.

The heat of the day had accumulated the materials of thunder above the high mountains. Frequent flaſhes of lightning diſcovered to us their ſummits, and the thunder rattled with a tremendous noiſe.

During the night the current had carried us more than twenty minutes towards the north. At ſix in the morning we were 5,000 toiſes to the northward of Bouka Iſland. The vaſt plantations of cocoa-nut trees which adorned its ſhores, indicated a numerous population.

A canoe, with nine natives on board, put off, and ſteered towards us. We immediately hove to in order to receive them; but they ſtopped within three hundred toiſes of the ſhip, and ſhowing us their iſland, made ſigns to invite us on ſhore. There were but ſeven paddlers in the canoe; two other natives ſeemed wholly occupied in baling out the water, which beat over the ſides of the canoe, and in obſerving our movements.

A native put off alone from the beach, on a *catimarran,* and paddling with the greateſt celerity, came and joined the canoe, which kept always to the windward of us. Though a very old man, he appeared to be ſtill very robuſt. After having viewed us for ſome minutes, he plied towards the iſland, as rapidly as he had come off. He appeared to be a meſſenger diſpatched by the inhabitants, to make his obſervations, and to report to them what he had ſeen.

The canoe left us, and proceeded towards the Eſperance, another very large one having been already alongſide of her.

We ſaw at ſome diſtance a ſmall canoe, manned by five natives, who came a-ſtern of our ſhip, and kept at the diſtance of about 500 toiſes, notwithſtanding all our invitations to them to come on board.

In hopes of alluring thoſe ſavages, we let down into the water a plank, with ſome knives and nails upon it, and a bit of ſcarlet ſtuff by way of a flag, tied to a ſtick placed upright in its centre. They did not, however, ſeize upon thoſe objects, till we cut the ſtring which kept it nearer to the ſhip than they choſe to venture. The ſight of the bit of ſtuff diffuſed among them the moſt lively joy: they ſhowed us that they had accepted of our preſent, and earneſtly deſired more of the ſame ſort.

At laſt, by throwing them handkerchiefs, bits of red ſtuff, and empty bottles, we ſucceeded in bringing them alongſide. One of the bottles having taken in ſome ſea-water, the ſavage who took it up, thinking perhaps that we had ſent him ſomething good to drink, was diſagreeably miſtaken on taſting the contrary, and we regretted that we had not given him timely notice of the circumſtance.

Thoſe natives were acquainted with the method of barter, and took much pains to ſhew us the price of their goods.

We received a very fine bow and ſome arrows, in exchange for a few handkerchiefs, which we let down to them by a rope. As they did not obſerve that we poſſeſſed this kind of weapon, they endeavoured to make us ſenſible of its value, by ſhowing us its uſe.

One of the gunners went for his fiddle, and played them ſome tunes; and we had the pleaſure

ſure to ſee that they were not inſenſible to muſic. They offered us a number of things in exchange for the inſtrument, making ſigns for it, by imitating the motions of the fiddler upon a paddle. But they ſoon found that their ſolicitations were fruitleſs. It was the only fiddle by which the ſhip's company danced; and we had too long a voyage before us, to think of parting with the inſtrument, which procured us an exerciſe ſo ſalutary to ſeamen.

We had ſo loaded them with preſents, that they ſoon began to make difficulties in giving their commodities in exchange for ours, to procure which they had recourſe to unfair arts. The Commander had agreed to give them ſome handkerchiefs ſtriped with red, their favourite colour, for a bow, and truſting too much to their good faith, had delivered them the handkerchiefs: but inſtead of the bow, they would only give ſome arrows, which were refuſed.

Thoſe natives ſeemed to have a great propenſity to gaiety. They ſeemed to take pleaſure in repeating the words which they heard us pronounce; and the ſweetneſs of their language enabled them eaſily to ſucceed in the imitation.

They were paſſionately fond of muſic, and particularly of the moſt briſk and noiſy tunes. One of the officers, who was a good performer, played a very lively tune. They liſtened with very great attention; aſtoniſhment was viſible in their features; they could not conceal the pleaſure they felt; but, by different motions of their arms, which kept exact time with the meaſure, and a great agitation of the whole body, they gave unequivocal proofs of their ſenſibility.

They did not loſe ſight of the deſire which the Commander had expreſſed for a bow. One of them promiſed him a bow in exchange for a hat; but when he got poſſeſſion of the hat, he refuſed to ſurrender the bow.

Moſt of the things which we gave them were tied to the end of a line, which they were not at the pains to looſe; for they carried in their girdles, ſhells which were ſufficiently ſharp to cut it at once.

As we had good reaſon to diſtruſt their promiſes, a man went down by a rope ladder aſtern, with a view to exchange a bit of red ſtuff for a bow, when we perceived that the current had carried us to the north-weſt, and that we were already too near the ſhore. As a calm prevented us from ſteering the ſhip, we were obliged to put out a boat in order to tow her off. The ſavages thinking, no doubt, that we intended to purſue them, in order to puniſh them for their diſhoneſty, retreated precipitately towards the iſland. Out of gratitude, perhaps, for the patience with which we allowed them to cheat us, they committed no ſuch act of treachery as General Bougainville, in his voyage round the world, had experienced at their hands.

Four canoes were, all this while, dealing with the Eſperance. One of them was manned by natives, of whom ſixteen were paddlers, and the reſt warriors.

We learned from the people on board the Eſperance, that this war-canoe had long kept at a diſtance; but ventured to come alongſide, on ſeeing the different articles which their countrymen in the little canoes had procured.

The order with which the ſavages were ſtationed in the great canoe, indicated a kind of naval tactics. A warrior, armed with a bow and arrows, ſtood between every two paddlers on each ſide, and intermediate parties of two or three warriors ſtood with their faces towards the ſtern of the canoe, in order to obſerve the movements in that direction, and to fight while retreating. Thoſe warriors ſhowed no hoſtile diſpoſition; they ſeemed very fond of the wine and brandy which was given to them, but did not eat bacon, without a degree of repugnance.

Thoſe ſavages had excellent teeth, and found no difficulty in maſticating the hardeſt biſcuits which were offered to them.

Could thoſe natives have had any communication with the Engliſh and the Spaniards? One of them, on ſhowing us an arrow, which he was going to tie to the end of one of our ſtrings to convey it on board, pronounced, very diſtinctly, the Engliſh word *arrow*. Another, ſhowing us the land, and inviting us to it, made uſe of the Spaniſh word *tierra*.

We learned from the Eſperance, that ſeveral of them pronounced the word *Bouka*, the name which General Bougainville gave to their iſlan. This word, which in the Malayan language is the expreſſion of negation, and which, when the firſt ſyllable is pronounced long, ſignifies *to open*, doubtleſs ſeems to indicate ſome analogy with the Malayan; from which, however, it differs ſo much, that one of the ſhip's company, who ſpoke the language fluently, could not underſtand thoſe natives.

The value which they ſeemed to affix to nails, and the other articles of hardware which we gave them, ſhowed that they were acquainted with the uſe of iron.

The colour of their ſkins is blackiſh. They are of a middling ſtature; and being naked, their diſtinctly marked muſcles indicated great ſtrength. Their figure though not very agreeable, is extremely expreſſive. Their heads are very big; their foreheads broad, like the reſt of their faces, which are very flat, eſpecially under the noſe; their chins large and prominent; their cheeks full, their noſes flat, their mouths very large, and their lips very thin.

The betel, which gives a bloody tint to their large mouths, adds to the uglineſs of their appearance.

Their ears are loaded with large rings made of ſhells, the weight of which contributed to the large ſize of thoſe organs. Some had red and white ſtreaks traced upon their bodies; and we obſerved one whoſe hair and noſe were ſprinkled with a red earth, which appeared to be ochre. Some had bracelets formed of the fibres of the cocoa-nut huſk.

Their hair was curled, thick and bulky, like that of many papows, whom we afterwards met with.

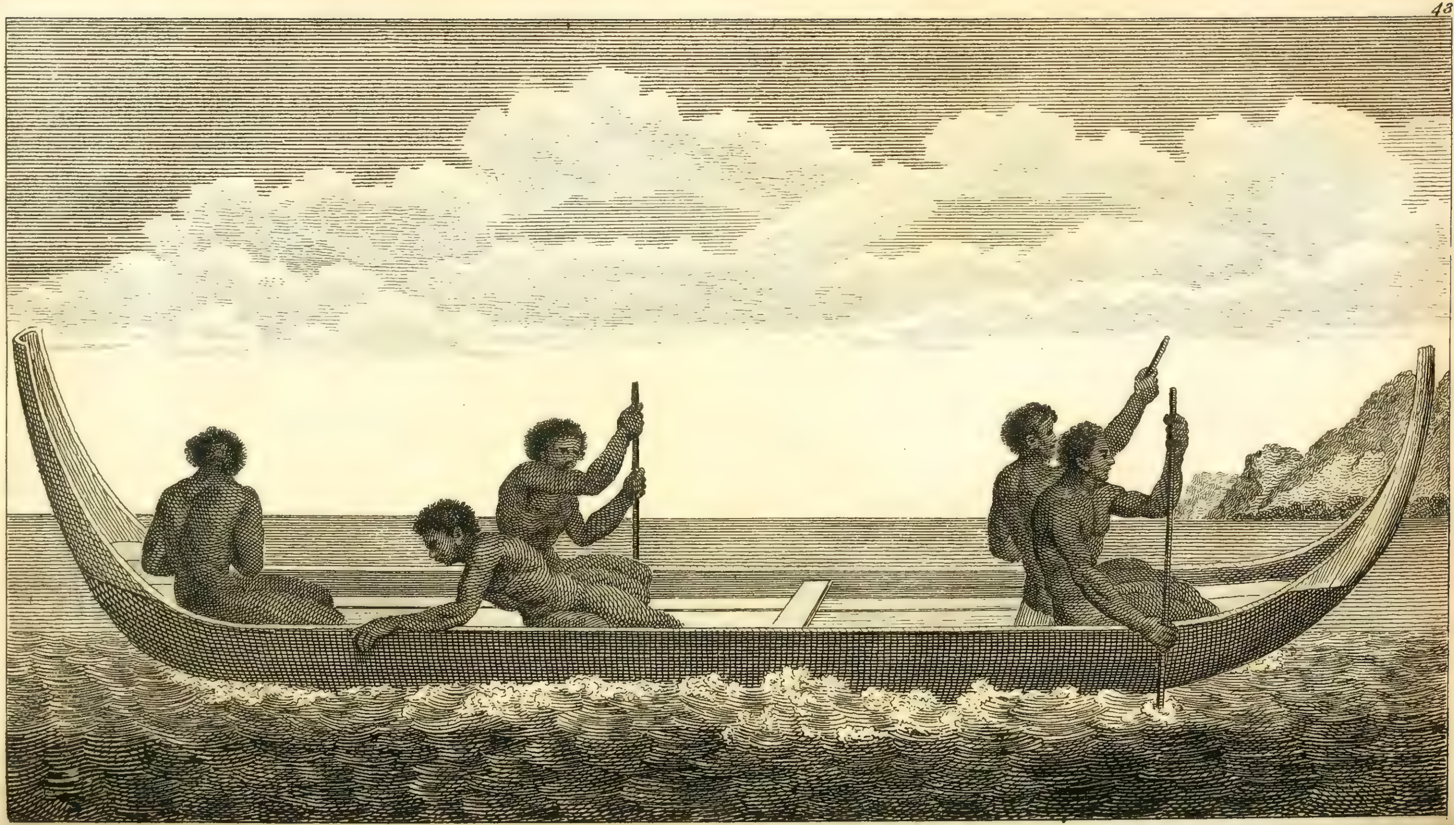
They are in the practice of plucking the hair from every part of the body. There was but one ſeen, on board the Eſperance, who allowed his beard to grow.

All of them had their loins girded with a cord, which went ſeveral times about the body, and ſeemed only deſigned as a point of ſupport, to increaſe the muſcular ſtrength of thoſe parts. One of them, probably with a ſimilar view, had his left arm tied in three different places, over the biceps muſcle; ſome flat bits of wood, on the outſide of the arm, ſupporting the ſtrain of the cord.

Thoſe ſavages appeared to handle the bow with much addreſs. One of them brought on board the Eſperance, a booby, which he had brought down with an arrow; and the fatal wound was ſeen in the belly of the bird.

The induſtry of thoſe iſlanders ſeemed to be particularly directed to the fabrication of their arms, which were formed with great care. We admired the ſkill with which they had coated their bow-ſtrings with a reſinous ſubſtance, which gave them, at firſt ſight, the appearance of catgut. The middle of the ſtring was done round with bark, in order to ſave it from wear, by giving the impulſe to the arrow. The inferior part of the arrows was very light, being formed of the ſtalk of the *ſaccharum ſpontaneum*; and the other part conſiſted of very hard wood, well pointed. The joining is ingeniouſly faſtened with about thirty turns of bark, as is alſo the part of the arrow which bears upon the ſtring, to give it the greater ſolidity.

Their



Their canoes, formed of ſeveral planks, ingeniouſly joined together, are of a ſhape at once elegant, and adapted for a quick motion. See Plate XLIII.

At the approach of night, a current ſetting to the N. N. W. communicated to the tide a rippling motion, ſo like the effect of a ſhoal, that it might have deceived the moſt experienced eye. The boat was ſent to ſound, but no bottom was found with twenty-ſix fathoms of line.

During the night, violent thunder claps diſſipated the thick clouds which enveloped the ſummits of the mountains, while we ſteered S. S. W. in order, if poſſible, to ſtem the current.

We had now explored the weſtern coaſt of thoſe two iſlands, as General Bougainville had their eaſtern parts, when he firſt diſcovered them.

The moſt eaſterly, which is at the ſame time the moſt ſoutherly, point of Bougainville Iſland, is in latitude 7° 4′ 50″ S. and in longitude 153° 18′ 34″ E.

The northern point, called Point Laverdy, is in 5° 34′ S. lat. and in 152° 31′ E. long.

The coral banks, which we diſcovered off Bougainville Iſland, are ſituated in 6° 11′ S. lat., and 152° 2′ E. long.

The north point of the iſland of Bouka, is in 5° 5′ 36″ S. lat. and 152° 9′ E. long.

The eaſterly variation of the compaſs diminiſhed till it came to 7° 30′.

The currents along the coaſt, carried us conſtantly from 8′ to 10′ to the north-weſt every day.

The thermometer did not riſe above 22°, although we were ſo near the Equator.

16th. At ſun-riſe we had ſight of a flat iſland, to which Carteret has given the name of Sir Charles Hardy, ſtretching from north 15° eaſt, to north 22° 30′ eaſt, diſtant about 15,000 toiſes. It is ſituated 25,000 toiſes N. N. W. of the iſland of Bouka.

About one in the afternoon, we came in ſight of Cape Saint George, on the ſouth-eaſt of New Ireland, bearing W. N. W., diſtant about 20,000 toiſes. It was found to be in 4° 54′ 30″ S. lat. and 150° 39′ E. longitude.

We worked to windward, by tacking, all the night.

17th. At day-break we ſteered for Carteret harbour, where we could not ſtop to anchor. Leaving the iſland of Marteaux about 25,000 toiſes on the ſtarboard, we ſteered ſo as to paſs very near the Booby rocks, leaving Laig Iſland on the larboard, and we arrived between the iſland of Cocos and New Ireland, where we came to an anchor, about half paſt one o'clock P. M. in thirty-two fathoms of water, the bottom being very ſoft black mud, mixed with calcareous ſand. We were about 200 toiſes from the iſland of Cocos.

The north-weſt point of New Ireland bore weſt 12° north, diſtant about 25,000 toiſes, and the ſouth-eaſt point of the ſame iſland bore ſouth 31° eaſt, at the ſame diſtance.

The middle of the paſſage, on the north-weſt of Carteret harbour, bore weſt 10° north.

At the diſtance of about fifty toiſes from the iſland of Cocos, we would have been in a harbour well defended on all ſides. There is anchorage at a very ſmall diſtance from the land; for about ten toiſes from the ſhore there are five fathoms of water, and, as the diſtance increaſes, the depth increaſes very rapidly.

We went on ſhore, on the iſland of Cocos, to paſs the reſt of the day. That little iſland, the higheſt part of which is not above ſeventy-five toiſes above the level of the ſea, is formed of very white calcareous ſtones. Having riſen from under the water, time has not much altered the form of the madrepores, which enter into its compoſition. They may be traced even on the rocks, which are the moſt expoſed to the injuries of the air. The iſland is terminated on the ſouth-eaſt, and on the north-weſt, by the ſame kind of ſtones. About mid-way between it and

Laig Iſland, there is ſufficient depth to allow ſhips a paſſage.

A great quantity of rain having fallen in the night, there aroſe ſo much humidity out of the woods, as formed clouds every inſtant, which originating chiefly in the loweſt places, reſembled, at firſt ſight, the ſmoke of fires kindled in the foreſt, and as ſoon as they had acquired ſufficient elevation to be expoſed to the current of air, they preſently diſappeared.

Large trees, which always preſerve their verdure, cover the iſland of Cocos. Though their roots find little vegetable mould among the calcareous ſtones, between which they penetrate, yet, in that moiſt ſituation, they flouriſh very luxuriantly. It was a pleaſant ſpectacle to ſee the fine tree, known by the name of *barringtonia ſpecioſa*, attracted by the humidity, extend its branches horizontally a great way over the ſea. That iſland produces fig-trees of different ſpecies; and we expected to find there abundance of cocoa-nuts. This expectation was indeed one reaſon for our preferring this anchoring place to ſeveral others at no great diſtance. But we found it difficult to procure even a dozen of thoſe nuts.

We ſaw, with concern, that ſome of the party, who had been ſent on ſhore for wood, had allowed ed themſelves to cut down the cocoa-nut trees for the ſake of the fruit. They carefully ſearched for the young leaves on the tops of the trees, which are very tender, and afforded very agreeable refreſhment to people who had lived long on ſalted proviſions. If we had permitted them, they would not have left a cocoa-nut tree in the iſland; and that anchorage would have been deprived, perhaps for ever, of a reſource extremely agreeable to navigators.

The night overtook us, when in the middle of the wood, and we were entertained with the charming ſpectacle of a prodigious number of glow worms, which diffuſed ſo much brightneſs as to dazzle, rather than enlighten us.

It was the time at which the ſpecies of crab called *cancer ruricola,* leaves the holes which it digs. On our way to the place where the boat was waiting for us, we trod upon ſeveral of them, and ſome of our party, before they knew what animal it was, were apprehenſive that it was ſome venomous reptile.

18th. The next day I viſited the ſouth-eaſt part of the iſland; but vines of different kinds prevented me from penetrating far into the foreſts.

Different ſpecies of the *epidendrum* adorned the trunks of the largeſt trees, and grew in the midſt of a great number of ferns equally paraſitical.

We obſerved, floating along the ſhore, the fruits of ſeveral ſpecies of the *pandanus*, of the *barringtonia ſpecioſa,* and of the *heritiera,* which ſtretched their branches, and even their trunks, in a very remarkable manner, over the waters of the ſea.

Two of our men who followed me ſaw an alligator cloſe to the ſhore, on the ſouth-eaſt extremity of the iſland of Cocos. But I do not believe that thoſe animals are very common there; for, during the whole time that we lay at anchor, no accident happened, though a great number of our people were in the habit of bathing.

Near the eaſtern extremity of this little iſland, I obſerved ſeveral kinds of *nautili*, diſſeminated amidſt the prodigious quantity of lithophites, which entered into its compoſition.

The abundance and continuance of the rains were aſtoniſhing. It was an inceſſant torrent of tepid water, which, however, did not hinder us from viſiting the environs of the anchoring place.

I landed ſeveral days ſucceſſively, on the iſlands of Cocos and Laig.

The number of inſects of different forms and colours was truly aſtoniſhing; and the rains did not appear to diminiſh their activity. They were chiefly *coleopteras,* which it was difficult to catch.

The moſt varied ſpecies belonged to the genus *cicindela fabr.*

We were entertained with the pleaſant view of different ſpecies of figtrees, from the top branches of which depended a great number of radicles, ſoon to be transferred to the ſoil, and to give birth to ſo many different trees.

The palm *cycas circinalis* hath multiplied greatly in the ſhallows, under the ſhade of the great trees. We obſerved near them, an arbour newly conſtructed with branches, where the natives had been repoſing, and had left the fragments of a repaſt they had made on the fruit of the cycas, the kernels of which, if eaten without preparation, are a powerful emetic, as ſeveral of our ſhip's company experienced; but the ſavages had roaſted them, as we obſerved the marks of fire on a great number of the huſks.

The kernel of the fruit of the *cycas circinalis*, is very bitter. The inhabitants of the Moluccas know how to put it to a better uſe, than thoſe of New Ireland, as I had occaſion to obſerve, towards the end of this voyage. Experience had taught them, that maceration freed it from its hurtful qualities; and the ſame proceſs may alſo ſucceed with many other fruits and roots, which, in this manner, may be rendered uſeful, as food for animals and even for man.

There lay on the ground, a great number of the fruits of the cycas, which the ſavages had not touched. Their ſucculent huſk, which diffuſed an odour, like that of the fineſt apple, contains fermentative particles ſufficient to produce a good ſpirituous liquor. Thoſe fruits abound there, and may be uſeful to navigators.

Among the large trees which grow on the iſland of Cocos, I obſerved, with ſurprize, a new ſpecies of arec, the trunk of which was above eighteen toiſes in height, and its thickneſs throughout, not more than three inches. It was difficult for us to conceive how a tree, ſo weak in appearance, could ſupport itſelf to ſo great an elevation; but our aſtoniſhment ceaſed, when we attempted to cut one down. Its wood was ſo very hard, as to reſiſt, for ſome time, the moſt forcible ſtrokes of the axe. A great quantity of interlaced *(amilacée)* ſubſtance, under the form of pith, occupied its centre, a circumſtance common to many other trees of the ſame genus. This pith taken out of the trunk, left a cylinder, the wood of which did not exceed four-tenths of an inch in thickneſs, and was of a fine black colour. The fruit of this new ſpecies of arec is red, ſcarcely larger than a common olive, and nearly of the ſame ſhape.

The *caryota urens* was one of the large trees of thoſe foreſts. Among the number of ſhrubs, were ſeveral ſpecies of the *dracæna.* Among the large trees, I admired a *ſolanum,* certainly the higheſt ſpecies of that genus; thoſe hitherto known to botaniſts, being only herbs or feeble ſhrubs. The leaves of this are oval, hard and very ſmooth.

That fine tree, the *tectona grandis,* ſo valuable for ſhip-building, grows at Carteret harbour. I alſo ſaw there different ſpecies of the *guettarda,* and a new ſpecies of *hermandia.*

Moſſes and ferns were very numerous, and grew with the greateſt luxuriance, in thoſe humid ſituations.

The weſtern ſhore of the Iſland of Cocos is precipitous, and very much elevated above the level of the ſea. The calcareous ſtones, of which it is compoſed, being much expoſed to the injuries of the weather, are very friable. I found there the nutmeg-tree, which Rumphius has deſcribed, under the denomination of *myriſtica mas* (*Rumph. Amb.* vol. 2. tab. 5.) The fruit was then but young. It is more elongated than that of the ſpecies which is cultivated.

Some ſavage muſt certainly have periſhed among thoſe rocks, for I found a human ſkeleton almoſt entire.

Near to that was a place where I ſaw the re-

remains

mains of a fire, which had been kindled by the natives who frequent that coaſt.

The continual rains at Carteret harbour, have rendered ſome ſpecies of ſpiders very induſtrious. They conſtruct excellent places of ſhelter, in the middle of their webs, conſiſting of a ſnug fabric, in the ſhape of a cornet of paper, four-fifths of an inch in height, and one-fifth of an inch broad in the baſe, with its top elevated and a little inclined towards the ſouth-eaſt, in order that the prevailing winds may have the leſs force on this little habitation. The rain glides off this kind of cone, without being able to enter it, or to preſs it down, being ſtretched on all ſides by threads faſtened to the neighbouring branches. The ſpider, being perfectly ſheltered in this habitation, never leaves it, but to ſeize the inſects which fall into her toils.

Another ſort of ſpider which is a leſs productive ſpinſter than the former, protects herſelf from the rain under a piece of a leaf bent into a form almoſt conical, which ſhe places in the centre of her web. Every precaution is taken to give ſolidity to her habitation, the point of which is oppoſed to the ſouth-eaſt wind, in order that it may be the leſs affected by its impulſe.

Nature hath done every thing for other ſpecies of ſpiders, which are covered with very hard ſkins, and as ſmooth as if they were coated with the fineſt varniſh. Thoſe ſuffer no inconvenience from the great rains to which they are conſtantly expoſed, and they wait patiently in the middle of their net, for the inſects which form their prey.

Among thoſe ſpiders, I found ſome, the bodies of which terminated in points: the *aranea aculeata*, and the *aranea ſpinoſa.*

The iſland of Laig, being much leſs than that of Cocos, preſents fewer productions. The land of it is of the ſame nature, but much leſs elevated.

The precipitous mountains of New Ireland, which border upon Carteret harbour, are at leaſt, three times as high as thoſe of the iſland of Cocos. The marine productions, of which they are partly compoſed, are obſervable, in the ſame manner, even on their ſummits.

On the 23d I landed on New Ireland, N. N. W. of the anchoring place, and near the place whence our ſhip received her water. The ſtream which furniſhed it, was viſible only near the ſea. Farther inland, we ſaw the channel of a torrent, along which, in different places, were cavities filled with water, which filtrating through the ſand, formed the little brook which ſupplied the watering-place. After an hour's walk along its banks, we came to a beautiful caſcade, which it formed, by daſhing from the high calcareous rocks, in which we obſerved vaſt grottoes, which ſerved as retreats for large bats, of the ſpecies denominated *veſpertilio vampyrus*.

Some wild bread-fruit trees grew in thoſe places.

At a time when Carteret harbour was inundated with continual rain, I was aſtoniſhed to ſee only the channel of a torrent without any water; but it appeared to me, that the rain did not extend far enough inland to fill it. Of this it was eaſy to be convinced, by the ſerenity of the ſky towards the ſouth-weſt, while at the anchoring-place, the rain fell without intermiſſion. Carteret harbour forms a ſort of baſin, where the clouds, loaded with water, after paſſing over the high mountains of New Ireland, experience a calm which hinders the air from ſupporting them. Hence reſult thoſe exceſſive rains, which render the anchoring-place far from deſirable to navigators.

Among the little plants, which grow in the ſhade of the foreſts, I obſerved ſeveral ſpecies of the *procris*.

Beſides the nutmeg-trees of which I have already ſpoken, nature hath furniſhed the inhabitants of New Ireland with the ſpecies of pepper, known to botaniſts, by the name of *piper cubebe*, which I obſerved adorning the baſes of the large trees, through a very extenſive ſpace.

Our boat was ſent a fiſhing on the coaſt of New Ireland, about 5,000 toiſes to the ſouth-eaſt. There were obſerved ſome habitations, which had been newly and very ingeniouſly conſtructed by the natives, who were not contented with the roaſted fruit of the *cycas circinalis*; for the remains of ſhell-fiſh were ſeen near thoſe cottages.

24th. When the Commander anchored in Carteret harbour, he intended to remain there at leaſt fifteen days; but the exceſſive rains made him reſolve to leave it much ſooner.

The greateſt activity had been been exerted in procuring our complement of wood and water; and on the morning of the 24th we had made every preparation for ſetting ſail.

The water which we took in at Carteret harbour was very good, and procured with great facility, by means of wooden ſpouts, which conveyed it into the boat, with no other trouble than lifting it three feet lower than the ſpout.

Our wood was cut in the Iſland of Cocos, and the conveyance of it was the more eaſy, as the boat could come cloſe to the beach. It is proper to remark, that the wood, which we obtained at Carteret harbour, introduced into the ſhip a prodigious number of ſcorpions and ſcolopendræ,

lopendræ, of the ſpecies called *ſcolopendra morſitans,* inſects which very much incommoded us.*

It was to no purpoſe, that we erected the obſervatory on the iſland of Cocos; for the inceſſant rains did not allow us to make a ſingle obſervation. It is difficult to form a proper idea of theſe exceſſive rains, which poured down in an almoſt uninterrupted torrent.

The thermometer, obſerved at noon, while we lay at anchor, varied from 19° to 21°; and the barometer only from 28 inches 1 7-10th lines, to 28 inches 1 2-10th lines.

Our ſhip lay at anchor in 4° 48′ 10″ S. lat., and 150° 25′ 40″ E. long.

This harbour afforded us no refreſhments; and we were unſucceſsful in fiſhing.

The tides took place but once a day, and roſe only about ſix feet.

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* The harbouring of ſuch noxious and abominable reptiles, is a ſolid objection againſt the wainſcotting of houſes in tropical climates, which is afterwards tacitly recommended by the author.—*Tranſlator.*

CHAP. VII.

Departure from Cartaret Harbour—On that Occaſion the Eſperance loſes an Anchor—Paſſage through St. George's Channel—View of the Portland Iſlands—Different Interviews with the Natives of the Admiralty Iſlands—Their fantaſtical Faſhion—Deſpotiſm of their Chiefs—Canoes—Aſtoniſhing rapidity of their Motion—View of the Hermit Iſlands—Their Inhabitants—View of the Exchequer Iſlands—A New Iſland—A Water Spout—View of New Guinea—Paſſage through Pitt Strait—Singular Effects of the Tides—Ravages of the Scurvy—Anchor at Amboyna.

ON the 24th of July about 11 A. M. we ſet ſail from Carteret harbour, and took advantage of a gentle breeze at ſouth-eaſt, to paſs through the north-weſt opening, between Cocos Iſland and New Ireland.

The current ſet to the W. N. W. and at noon we were 5,000 toiſes W. N. W. of our anchoring place.

The Eſperance, not having hove up her anchor in time to profit by this breeze, a calm ſucceeded almoſt as ſoon as ſhe ſet her ſails, and the current drove her towards the breakers, on the ſtarboard of her paſſage out of the harbour. She was therefore obliged to caſt anchor, and wait for a wind, to extricate her from this dangerous ſituation.

We lay to, in hopes that ſhe would ſoon rejoin us; but it was half an hour paſt four before ſhe could overtake us. The captain then told us that he was in danger of being wrecked at the entrance of the harbour which we had quitted. Having been forced by the current to come to an anchor on a coral bottom, the cable had been cut by the rocks, at the moment when a breeze ſprang up at ſouth-eaſt, and carried them from the rocks. They had come too near them to caſt a ſecond anchor with advantage; and the frigate quitted the ſtation with the loſs of an anchor, and three fathoms of cable.

Our poſition now enabled us to obſerve, that the channel of St. George is not more than 30,000 or 35,000 toiſes in breadth, at its ſouthern extremity. The obſcurity of the weather appears to have led Carteret into the error, of ſuppoſing its breadth almoſt double of what we found it.

We tried during the night, and the current carried us into St. George's channel, at the rate of 2,500 toiſes in the hour.

About one o'clock in the morning the Iſle of Man bore W. S. W., diſtant 5,000 toiſes.

A very thick ſog concealed from us, all day, the lofty mountains of New Ireland. But their ſummits appeared from time to time, and we had ſight of mountains towards the centre of that iſland, at leaſt 1,000 toiſes in perpendicular elevation. We obſerved large trees even on the higheſt of their peaks.

At four in the afternoon we lay to, with an intention to explore Sandwich Iſland the next day. But the currents hurried us along with ſuch rapidity during the night, that at day break, when we were ſetting the ſails, we were aſtoniſhed to find ourſelves not more than two hundred toiſes from that iſland.

The watch had probably been aſleep; for we received no intimation that the current was driving us upon the coaſt; which, however, even at that ſmall diſtance, happily preſented no danger.

The iſland of Sandwich has no conſiderable elevation. Like New Ireland, it was covered with trees; and ſome old trunks, after loſing part of their branches, were ſcattered here and there upon the little hills. Being covered with paraſite plants, they looked like columns adorned with garlands, and added greatly to the picturеſque appearance of that charming iſland.

The part of New Ireland too, which lies oppoſite to Sandwich Iſland, preſents a tract but little

elevated.

elevated. There aroſe, however, in the middle of a vaſt plain, ſome little hills which might be 200 or 250 toiſes in perpendicular height.

The north-weſt part of Sandwich Iſland terminates in ſeveral points or ſlips of land, advanced into the ſea. We diſtinguiſhed five principal ones; and near the baſe of one of them, is a peaked hill, which is the higheſt land in the iſland; although its perpendicular altitude does not exceed 200 or 250 toiſes, and conſequently it is much leſs elevated than Captain Carteret alledges. The clearneſs of the weather, and the near approach we made to this little mountain, enabled us to judge of its elevation.

Some huts in the ſhade of the woods of cocoanut trees, made us hope for an interview with the inhabitants of Sandwich Iſland; but it was doubtleſs too early in the morning for them to pay us a viſit, for we did not ſee a ſingle individual.

The moſt weſterly point of that iſland is in 2° 59′ 26″ S. lat. and 148° 29′ 15″ E. longitude. Its greateſt length, from E. S. E. to W. N. W. is 15,000 toiſes.

At its weſtern point we obſerved a little iſland, which Carteret had not perceived.

Ten days had elapſed without our having had an opportunity of obſerving the paſſage of the ſun over the meridian; but on the 26th of July, we found our latitude at noon to be 2° 50′ 29″ S., and our longitude 148° 16′ 50″ E.; and we were enabled to determine the ſituation of the northern, and moſt weſterly point of New Ireland, which was in 2° 44′ 30″ S. lat., and 140° 11′ 30″ E. longitude. The obſcurity of the weather muſt have occaſioned the error of Carteret, who placed it above 10,000 toiſes farther to the north.

About four o'clock in the evening, we were diſtant about 1,500 toiſes from a great number of little iſlands, ſituated at the entrance of the channel which ſeparates New Ireland from New Hanover; and we obſerved that the paſſage between thoſe iſlands was obſtructed by reefs.

New Ireland is terminated by low lands.

New Hanover, towards the north-weſt, preſents a flat ſurface, while its centre is occupied by a chain of very high mountains, which extend towards the ſouth-eaſt.

27th. In the morning of this day, we had ſight of Portland Iſlands, which we coaſted at a ſmall diſtance. They form a group of ſeven little iſlands, which occupy a ſpace of about 7,500 toiſes in extent, in the direction of eaſt and weſt. They are very flat, covered with large trees, and are connected together by reefs and ſand-banks.

Thoſe little iſlands are in latitude 2° 39′ 44″ S. and in longitude 147° 15′ E.

28th. We continued to direct our courſe towards the Admiralty Iſlands, where Commodore Hunter, according to the account of two French captains, believed that he ſaw the wreck of the unfortunate expedition of La Perouſe; and we ſteered for the moſt ſoutherly of the little group. Like moſt of the iſlands in the South Seas, this is bordered by reefs at a ſmall diſtance from the beach.

A line of fifty toiſes in length did not reach the bottom; although we were but 1,000 toiſes from the land.

We obſerved towards the S. W. ſome canoes proceeding along ſhore, within the reefs; but none of them ſeemed deſirous of getting clear of the reefs, in order to come towards us. We alſo diſtinguiſhed ſome groups of natives, upon the moſt advanced points of land, in order that they might have the better view of our ſhips.

A large tree ſtanding above the breakers, was taken by ſome for the wreck of a ſhip; but the branches and roots which were diſtinctly ſeen, left no doubt that it was a tree, which had been detached from the coaſt.

The Commander ſent an officer on board the Eſperance, to concert with the captain the reſearches which it would be proper to make at the Admiralty Iſlands, agreeable to the intelligence which

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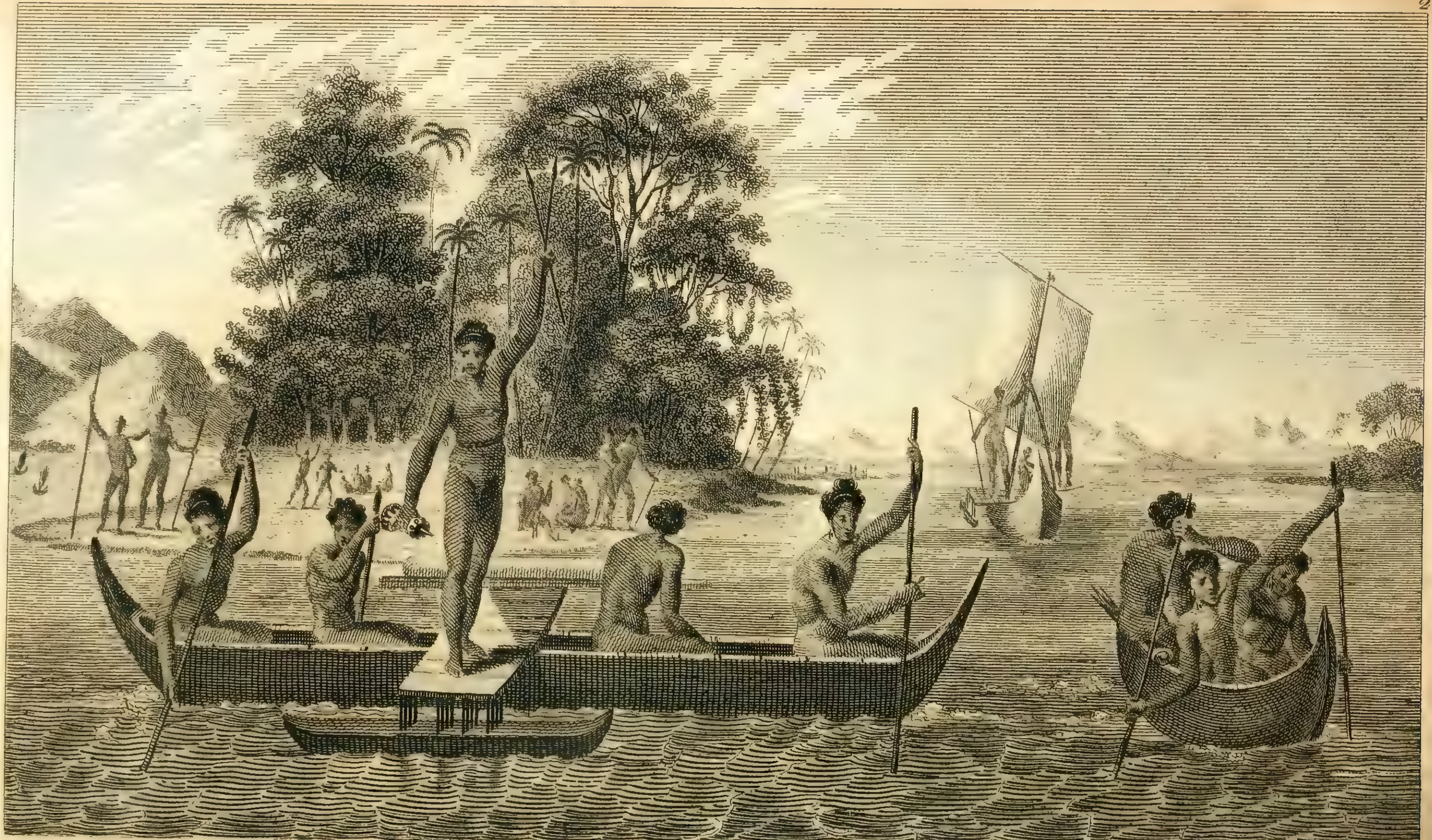


View of the Admiralty Islands

which had been ſent us at the Cape of Good Hope.

We paſſed the night in beating about, and making head againſt the currents.

29th. Captain Huon waited on the General, early the next morning. He was of opinion, that we ſhould viſit the iſland E. N. E. of that we had coaſted. In fact, according to one of the depoſitions which had been ſent to the Commander of the expedition, it was on the moſt eaſterly iſland that the ſavages had been ſeen cloathed in the uniform of the French marine. About the middle of the day we were within 2,500 toiſes of that iſland, and ſaw ſome of the natives coming towards the beach. Some huts were ſeen among the cocoa-nut trees. Other iſlanders ſoon appeared on the ſouth-eaſt point; and their number increaſed as we approached them. Some canoes lay upon the ſand, and we hoped to ſee the natives launch them, in order to meet us; but they made no diſpoſitions for that purpoſe. As the General wiſhed to have an interview with them, we went under the lee of the iſland, where we found but little ſhelter, it being of ſmall extent. A crowd of natives now appeared. Some ran along the ſhore; others kept their eyes directed towards our ſhips, inviting us by ſigns to come on ſhore, and expreſſing their joy by ſhouting. Some of them launched a canoe, but heſitated for ſome time to come near our ſhip, and paddled towards the Eſperance which was more to windward. This little canoe was furniſhed with an out-rigger, and had on board ſeven natives, who almoſt immediately returned on ſhore.

At half paſt one o'clock we brought to, and diſpatched from each ſhip a boat, with different articles, to be diſtributed among the inhabitants of that little iſland. While the boats were approaching the land as near as they could, the frigates were in readineſs to protect them, in caſe of an attack from the ſavages; for the perfidy, which the inhabitants of the moſt ſoutherly of the Admiralty Iſlands had practiſed on Carteret, gave us ſome apprehenſions with regard to the intentions of thoſe. That voyager tells us, that in September 1767, when he diſcovered the ſouthern part of that archipelago, the ſavages attacked him with two volleys of arrows, notwithſtanding the marks of friendſhip which he had laviſhed upon them.

This iſland was cultivated to its very ſummit. Several pieces of land were fenced in, which made us believe that the inhabitants were acquainted with the right of property. The whole iſland preſented the appearance of a little round mountain, the baſe of which was adorned with beautiful plantations of cocoa-nut trees, while its more elevated parts appeared to be allotted to the cultivation of different roots, which alſo furniſh food to the inhabitants.

When the boats came within about fifty toiſes of the ſhore, they found no bottom with thirty-three fathoms of line ; and the reefs, with which the iſland is bordered, prevented them from approaching nearer.

A great number of natives advanced to the beach. We counted more than an hundred and fifty, who practiſed every mean in their power, to induce us to land on their iſland ; but the reefs were an obſtacle which we could not ſurmount. They threw our people ſome cocoa-nuts, and were pleaſed and aſtoniſhed to ſee with what facility they were opened with an axe.

One of the natives, diſtinguiſhed from the reſt by a double row of little ſhells, which adorned his forehead, appeared to poſſeſs great authority. He ordered one of the natives to ſwim towards us with ſome cocoa-nuts. The fear of approaching perſons of whoſe intention he was ignorant, made the iſlander, ſwimming and defenceleſs, heſitate a moment. But the chief who, doubtleſs, was little accuſtomed to have his will diſobeyed, did not allow him to reflect. Blows from a cudgel, which he held in his hand, immediately ſucceeded his orders, and enforced inſtant obedience. We did not expect to ſee a man treated in this manner, in the midſt of a crowd of people, who appeared to be ſo little removed from a ſtate of nature. By way of comforting the poor fellow, our people gave him ſome bits of red ſtuff, a few nails, and a knife, with which he was greatly pleaſed. No ſooner had he returned to the iſland, than curioſity collected all the reſt around him, every one wiſhing to ſee our preſents. Canoes were immediately launched, many natives took to the water and ſwam, and in a ſhort time there was a great concourſe around our boats. We were ſurprized to ſee that neither the force of the ſurf, nor of the breakers, diſcouraged them from this attempt.

There was another chief diſtinguiſhed by the ſame ornaments as he who has been already mentioned; and alſo by the blows, which he inflicted with his cudgel, on thoſe to whom he gave his orders.

Thoſe iſlanders, who ſignified the greateſt ſatisfaction at the ſight of our nails, and ſtill more of our hatchets, had ſome difficulty in perceiving the value of our knives. At firſt they required them to be ſhut, before they would receive them; but their fears were very quickly baniſhed, and they received them open as well as ſhut. Thoſe people gave us ſome ſpears, armed with bits of vitreous, volcanic lava, terminating in a point, and very ſharp in the edges. They alſo preſented us with combs, having only three teeth, very diſtant from each other, very heavy bracelets, formed of large ſhells, and others conſiſting of ſmall *buccinæ,* ſtrung on a fibrous ſubſtance, as ſtrong as the beſt hemp.

When aſking for our articles in exchange for theirs, thoſe ſavages often repeated the word *capelle.* It appeared to us that this was their name for iron, which they preferred to every thing we could offer them.

Like the natives of Bouka, they repeated with much juſtneſs, the French words which they heard us pronounce.

One of their canoes was driven by the ſwell againſt one of our boats, and received ſome damage. One of our rowers taking hold of it to prevent a ſecond ſhock, a chief, miſapprehending our intention, made the ſignal to the canoe-men, the greater part of whom precipitately jumped into the ſea, with a deſign to ſwim on ſhore; but they returned as ſoon as they perceived their error, and confidence was re-eſtabliſhed.

The women kept at ſome diſtance, under the cocoa-nut trees. Their whole cloathing conſiſted of a piece of mat, round their middle.

The men were very buſy about our boats. Some ſwam towards them, ſhowing their cocoa-nuts; and others ſeemed to be attracted by curioſity; but it was ſoon diſcovered that this was not their only paſſion; for they exerted all their addreſs to get poſſeſſion of our goods. Impunity increaſed their boldneſs; and, when they miſſed their aim, they were not diſcouraged; but preſently endeavoured to ſeize ſomething elſe.

One of thoſe thieves ſeized upon a knife; but being caught in the fact, he was obliged to give it up. This did not make him abandon his enterprize, and he loſt nothing by his failure. A flag, in which red predominated, attracted his regards: he found means to get poſſeſſion of it, and the theft was not perceived till he had got a great way from the boat, and had almoſt reached the iſland.

A looking-glaſs having been given to one of thoſe ſavages, he contemplated his image with ſurprize; but immediately broke the glaſs, hoping, no doubt, to find in it the objects which it reflected.

The complexion of thoſe iſlanders is black, but not very deep. Their phyſiognomy is agreeable,

able, and not very different from that of the Europeans. Born in a fine climate, and a fertile iſland, they ſeem to be happy, if one may judge from the air of ſatisfaction, which is expreſſed in all their features. The hair of their heads is criſped, and they are in the practice of removing it from every other part of the body. It appeared that the volcanic glaſs, with which they pointed their ſpears, ſupplied them alſo with razors; for they made ſigns to one of our gunners, who wore whiſkers, to ſhave them with this ſort of glaſs.

The boats had orders to return about four o'clock. Their departure ſeemed ſenſibly to affect the natives, who redoubled their importunity in ſoliciting us to land in their iſland. All the women came to the beach, and joined their invitations to thoſe of the men. They were, no doubt, much ſurpriſed that they had not more ſucceſs; but the order had been given, and our boats could not delay their departure.

It was with regret that we left thoſe people, at the moment when they had launched ſeveral canoes, loaded with cocoa nuts, and were bringing them to us. The delicious water of thoſe fruits, would have been of the greateſt utility in ſtopping the progreſs of the ſcurvy, which had already begun its ravages in both the ſhips. If our boats could have ſtopped ſome minutes, they would have procured a great number of them.

The ſatisfaction with which thoſe iſlanders received nails, and other articles of iron, and the anxiety they ſhowed to obtain them, were proofs that they were acquainted with that metal.

Thoſe people, at firſt, manifeſted every appearance of good faith ; but they diſcovered their inclination to theft, as ſoon as they thought themſelves certain of impunity. We had occaſion to obſerve, that thoſe who were the moſt advanced in years were the boldeſt thieves.

That little iſland, which is nearly circular, is about 25,000 toiſes in diameter, and is ſituated in 2° 18′ S. lat., and 145° 46′ E. long. It is extremely populous ; for we ſaw about three hundred of its inhabitants.

The white appearance of ſeveral places of the iſland, where fractures diſcovered the ſtrata, gave me reaſon to believe, that its baſe is of a calcareous nature, like the greater part of the South Sea iſlands.

As ſoon as the boats were hoiſted on board, we directed our courſe towards the E. ¼ N. E.

30th. The next day we got to the northward of the Admiralty Iſlands. There we perceived, that an extenſive mountainous iſland occupies the centre of the group, the circumference of which conſiſts of a great number of little flat iſlands, which ſeem to have emerged from the boſom of the ocean, at no very diſtant period. Almoſt all of them are connected together by reefs and ſand banks.

About ſun-ſet we were 8,000 toiſes to the north-eaſt of the little iſlands which were neareſt to the principal one.

31ſt. As ſoon as day-light appeared, we ſteered W. S. W. ſtanding in for the land. Some canoes, which a very high ſail made to loom large, appeared at a diſtance.

We were to leeward of thoſe iſlands, in a large bay, formed by their curvatures, and a ſhort diſtance from the land. We ſounded ſeveral times, with ſixty-eight fathoms of line, but found no bottom.

There were many cocoa-nut trees on moſt of the little iſlands. A great concourſe of natives came upon the beach, and ſome of them advanced as far as the adjoining reefs. The little iſlands where there were no cocoa-nut trees, did not ſeem to be inhabited; for we ſaw not a ſingle ſavage upon them.

Several canoes were launched, many ſtill lay on the ſand, and ſix, which had ſet ſail, were making towards our ſhip. We immediately lay to, in order to receive them. Some of them were manned with ſeven natives, and others with nine. Having come within 300 toiſes of our ſhip, they furled their ſail, and uſed the paddle to make a nearer approach. Each canoe had a commander, who ſtood on a platform, and gave his orders. When the canoes had paddled about 150 toiſes, they ſtopped, and from that diſtance one of the chiefs addreſſed us in a ſpeech. His eloquence was wholly loſt on us; but the ſigns with which it was accompanied, did not allow us to doubt that he wiſhed to induce us to land. Probably the paddlers were not permitted to ſpeak; but they joined their ſigns of invitation to thoſe of the chief.

We endeavoured, on our part, to prevail on them to come nearer our ſhip. They could not reſiſt the ſight of our large pieces of red ſtuff; and, after appearing to deliberate upon the caſe, they advanced a little.

Some of our officers imagining that the ſound of the bells would be agreeable them, they were immediately rung; but, as ſeveral perſons had foreſeen, the noiſe, inſtead of attracting the ſavages, made them take to flight. They were induced, however, to return, by the ſight of ſeveral flags which we waved, and by ſome tunes played by our fiddler.

Preſents might procure us their confidence. We therefore threw them an empty bottle, which we ſuppoſed they would immediately ſeize upon. But they appeared to look upon it as a fatal gift; for they paid no other attention to it, than to keep at a diſtance from it.

Nails and knives which were floated to them upon a board, occaſioned loud expreſſions of joy, when the ſavage who took them up ſhowed them to his companions. It appeared then, that thoſe natives were acquainted with the uſe of iron.

None of them had hitherto ventured to touch the bottle; but the preſents having won their confidence, one of them took poſſeſſion of it, and cut the ſtring by which it was held, with a piece of volcanic glaſs.

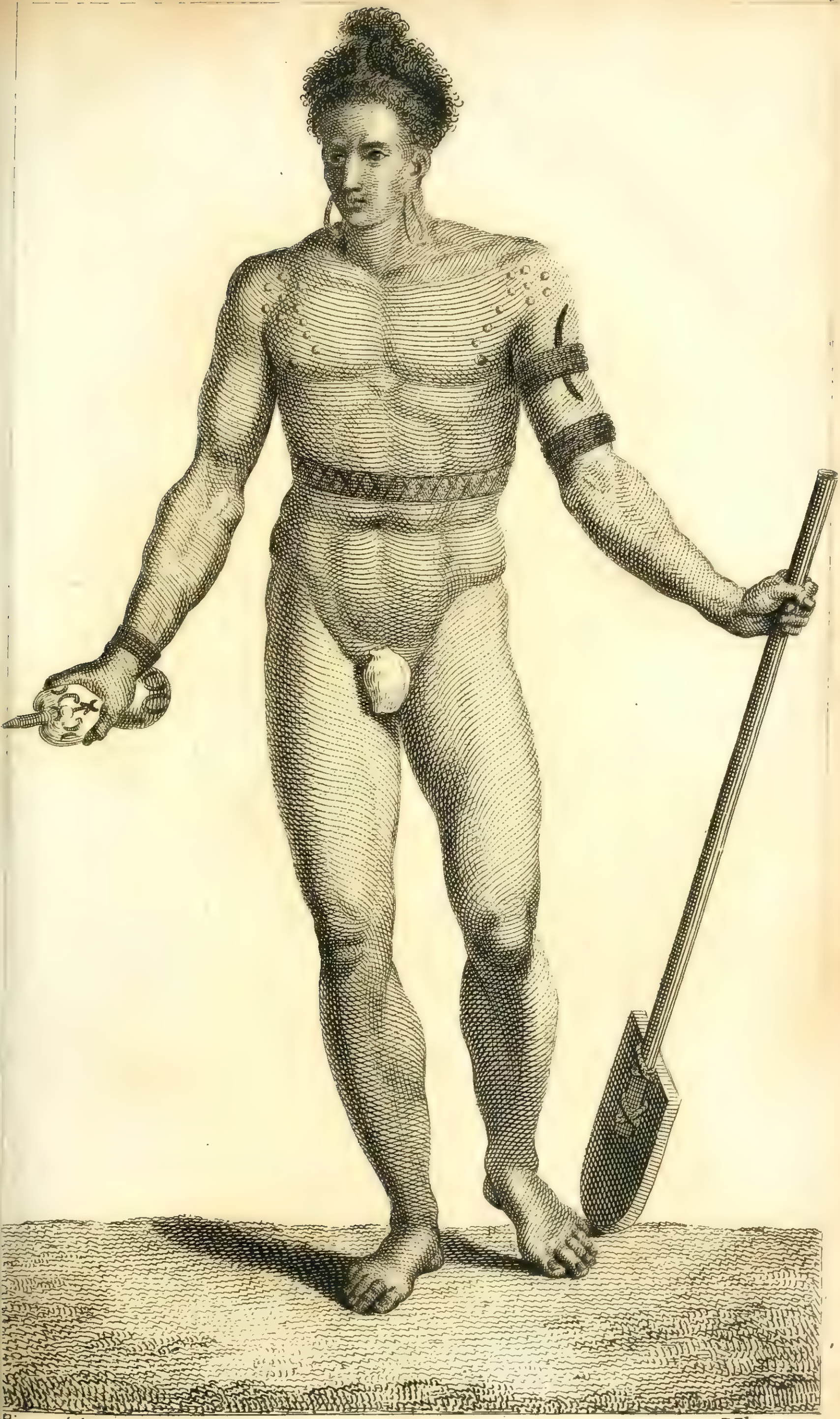
The natives now made no difficulty of coming alongſide of the ſhip, but would not conſent to come on board. The number of canoes by degrees increaſed, and our barter was carried on with the greateſt fairneſs imaginable. We even ſaw ſome of thoſe people, who were puſhed at a diſtance from the ſhip, by the concourſe of canoes, before they could give us the article which they had agreed to exchange for that which they had received, making their utmoſt efforts for that purpoſe. They carefully ſought for the perſons to whom they were indebted; and ſome of them, after an interval of half an hour, came and delivered us the articles which they owed.

[In this place the Author has minutely deſcribed a ſingular cuſtom which prevails among the natives, who, according to him, cover certain parts of their bodies with a white ſhell, denominated *bulla ovum*, (See Plate III.) which, however, they appeared willing to diſpoſe of. Delicacy forbids the Tranſlator from entering either into a deſcription of the ſhell, or of its uſes.]

The great number of canoes with which we were ſurrounded, prevented many of them from approaching the ſhip; but ſome of the canoemen ſwam towards us with the objects of their barter. Thoſe iſlanders preferred, to every thing that we offered them, bits of iron in whatever form they happened to be. They ſo well diſtinguiſhed that metal from all other ſubſtances, that they recognized it, even when coated with ruſt.

I thought that habit muſt have rendered thoſe people excellent ſwimmers. But their movements were too precipitate; though they differed in no other reſpect from our good European ſwimmers. They needed not, however, to have made great efforts to ſupport themſelves in the water; for, by keeping their mouths ſhut, they immerſed a part of the head. Several ſupported themſelves in the water, by the motion of their

feet



Piron, del.

P. Thomson Sc.

Savage of the Admiralty Islands.

Pub.d by I. Stockdale, Piccadilly, 15th April, 1800.

feet only, till they tied to our ropes, the articles which they wiſhed to barter.

If we may judge of the character of thoſe natives, by their conduct towards us, their diſpoſitions were excellent: an air of goodneſs was expreſſed in their features. Very different from the ſavages of the little iſland, which we had viſited two days before, they gave us proofs of great probity. It was ſurpriſing to meet with ſo great a difference in the manners of ſavages, ſo little removed from each other, and who practiſed the ſame arts. The diſparity of their conduct towards us might have proceeded from this; that the ſavages of the little iſland had dealt only with boats, whereas the others did buſineſs with large ſhips, which inſpired reſpect.

The commanders of the canoes commonly made the paddlers ſurrender the articles which we had given them. We ſaw with pain, that they ſometimes employed violence for this purpoſe. One of thoſe poor people had received from us a bit of red ſerge, which he was not willing to deliver to one of the chiefs; but the latter forced it from him, by repeated blows with his cudgel.

At the ſame time, one of the iſlanders, in another canoe, was treated with ſimilar harſhneſs, by one of the chiefs, becauſe the poor wretch had allowed his attention to be occupied in contemplating our ſhips, and had forgotten to bale the water out of the canoe.

The natives who ſwam towards us, in order to exchange their commodities, were conſidered as competitors, and ſoon excited the jealouſy of thoſe in the canoes which ſurrounded the ſhip. Theſe laſt took great care to preſerve their ſituation: they endeavoured to keep off the ſwimmers, and would not allow them to reſt, by taking hold of their canoes. The ſwimmers, being thus obliged to move about continually, in carrying on their barter gave a great deal of activity to this ſingular ſcene of commerce.

Theſe natives, like thoſe whom we had ſeen two days before, preferred nails to knives.

Several had in their hands calabaſhes of different ſhapes, filled with lime very finely pulverized. Others had their lime in pieces of bamboo. One of theſe laſt, who had a ſpoon in the ſhape of a ſpatula, filled it with lime, which he ſhowed to us, no doubt by way of recommending its qualities. By making many motions with his mouth, and greatly inflating his cheeks, he ſeemed deſirous to perſuade us, that his lime produced very agreeable ſenſations.

Another chief had a little parcel of the leaves of the pepper tree, *piper ſiriboa,* Linn.

They probably chew them without the addition

tion of arec nuts; for we ſaw in their mouths none of the marks which are produced by the maſtication of betel. We obſerved thoſe articles of luxury only in the poſſeſſion of the chiefs, for whom they are probably reſerved.

Some of thoſe ſavages wore bracelets formed of large ſhells, among which we obſerved ſea ears, ground in the middle and the edges.

Moſt of them had different kinds of ſhells appended to the inferior lobes of their ears, which, when pierced, they are in the habit of extending ſo prodigiouſly that they deſcend lower than their ſhoulders, as appears in Plate III. It ſeemed that they produced this great diſtenſion, by introducing elaſtic hoops into the holes. The only child we ſaw was furniſhed with two ſuch hoops.

Their hair is criſped and black; but they frequently render it red with a mixture of ochre and oil, and ſometimes they tie it up with a fillet of bark. Their ſkin is a light black, which they ſometimes adorn with red figures in different parts of the body.

They carried neither bows nor clubs but only ſpears, from about five feet to ſix feet and a half in length. (See Plate XXVIII. Fig. 25.) The vitreous volcanic lava, of which their heads were formed, was ground to a ſharp edge on each ſide,

about

about three inches in length, and faſtened with a ſtring, coated with a kind of maſtic.

This weapon muſt be dangerous among a people who wear no cloaths. Their ſkin, conſtantly expoſed, muſt be ill able to reſiſt ſo ſharp a piece of glaſs, eſpecially in places where it has a little tenſion.

This volcanic glaſs is perhaps not very common in the Admiralty Iſlands; for ſome of thoſe ſavages had ſpears armed with ſharp pieces of wood inſtead of glaſs.

Many had the *ſeptum* of the noſe pierced with a hole, which contained a ſtring, to the extremities of which were ſuſpended dogs' teeth twice as long as human ones. One of them, wiſhing to part with this ornament, a chief, in cutting the ſtring aukwardly, which was too ſhort, with a piece of volcanic glaſs, wounded the native.

An order iſſued by the General very much interrupted this bartering trade; although the natives ſtill had a great many things which they wiſhed to diſpoſe of. One of the chiefs very much amuſed us with his calabaſh of lime, the properties of which he diſplayed with many oſtentatious airs, thinking, no doubt, thereby to enhance its price. His geſtures might have been conſidered, as a happy imitation of thoſe of our moſt dextrous mountebank doctors.

We did not obſerve among thoſe iſlanders any articles of European origin. As by this time, we bought ſcarcely any thing, they quitted our ſhip, and carried the reſt of their manufactures alongſide of the Eſperance.

Their canoes are formed of the excavated trunk of a tree, with boards fitted to its ſides. Their length is thirty-two feet, and their extreme breadth not more than twenty-ſix inches. Their ſides are ſupported internally by croſs boards, which form ſo many diviſions, in the bottoms of which are the paddlers, towards the two extremities of the canoe.

Thoſe canoes are furniſhed with an outrigger, about thirteen feet in length, which projects laterally and nearly at the ſame diſtance. On the oppoſite ſide is a counter-outrigger, which does not take the water, and which is eight feet in length. It ſerves as a place upon which to lay the ſail; the commander ſometimes ſits upon it; but his ſtation is commonly on an elevated platform or trellis, of the ſame extent as the outrigger.

The ſail is a mat, in the form of a regular ſquare, 13 feet in the ſide. Two oppoſite ſides of it are faſtened to poles of the ſame length, which ſerve for yards. When the ſail is ſet, one of its diagonals is always vertical, and its upper angle is elevated three feet above the top of the maſt, which is about twenty feet in height. The wind acts ſtrongly upon ſo lofty a ſail, and gives to thoſe canoes an impulſe, which makes them plough the water with aſtoniſhing rapidity.

When this ſwift motion is not required, they only hoiſt about five feet of one ſide of their ſail in a horizontal poſition, while the reſt of it lies on the canoe. But in this way they can only ſail right before the wind.

Their paddles are very broad, and are furniſhed with a handle ſix feet and a half in length. They uſe them as our ſailors do their oars; for they act like levers, whoſe point of ſupport is on one ſide of the canoe. The ſteerſman is ſtationed in the ſtern, and directs the canoe with his paddle.

After lying to till half paſt ten in the morning, we continued to follow the coaſt in a weſterly direction. It is every where bordered with iſlands connected together by reefs. We obſerved, beyond thoſe reefs, ſeveral fiſhing places, conſtructed with ſtakes fixed in the bottom, at a certain diſtance from the beach, and which reſembled thoſe which we afterwards ſaw in the Moluccas.

As ſoon as we ſet ſail, the canoes followed our example, in order to accompany us. We admired the celerity with which that flotilla clave the waters. Although we had a very freſh breeze, and a great deal of ſail ſet, thoſe little veſſels ſailed a great deal faſter than our ſhips.

Cloſe to a fiſhing place, much larger than any that we had ſeen, were ſeventeen canoes which immediately paddled towards us. We hove to, in order to wait for them; but as, notwithſtanding our invitations, they remained at the diſtance of five hundred toiſes from our ſhip, we reſumed our courſe, directing it to the W. ¼ S. W.

At the cloſe of the day, two canoes puſhed off from the ſhore, and advanced towards us. It was night before they came within hearing. One of the commanders immediately addreſſed us in an elevated voice. It is proper to obſerve, that the voices of thoſe natives are very ſhrill. As it was almoſt quite calm, we endeavoured to allure them to the ſhip; but they durſt not venture near enough to receive our preſents.

It was imagined that a ſquib would be a pleaſing ſpectacle to them; but on the contrary it terrified them ſo much, that they retreated with precipitation.

Notwithſtanding the darkneſs of the night, thoſe two canoes, guided by our lights, returned towards us. We ſent them ſome articles of hardware, upon a board along with a lighted taper. The light, which we ſoon left at a diſtance, engroſſed their whole attention; but they durſt not come nearer to it than about 200 toiſes. It was amuſing enough to hear the two chiefs addreſs long ſpeeches to the taper. They ſpoke with much warmth, ſuppoſing, no doubt, that one of us was coming towards them with this light. Chagrined, perhaps, at its ſilence, which formed ſo direct a contraſt to their babbling noiſe, they returned in about two hours towards their iſland. Fires were all the while kept burning upon the beach, perhaps to ſhow the canoes the place to which they were to return.

We lay to all the night.

August 1ſt. In the morning we ſaw the weſtern extremity of that little inſular group, which extends about fifteen leagues from eaſt to weſt. The moſt weſtern iſland is in 2° 11′ 36″ ſouth latitude, and in 143° 47′ 38″ eaſt longitude.

Reefs and ſand-banks extended beyond them 8,000 toiſes towards the ſouth-weſt.

We ſoon came in ſight of other reefs, which were 5,000 toiſes in extent from eaſt to weſt. They are ſituated in 2° 13′ ſouth latitude, and 143° 40′ eaſt longitude.

We carried a little ſail towards W. N. W. during the night.

At day-break we had ſight of the Hermit iſlands, diſcovered in 1781, by the Spaniſh frigate the Princeſſa, which ſaw them at the diſtance of about 25,000 toiſes. Their high lands ſeemed, at a diſtance, to leave intervals between them ſufficient to afford us a paſſage; but we ſoon perceived their low-lands advancing into the ſea, and diſtinguiſhed the reefs which connected them together.

That little cluſter is compoſed of thirteen ſmall iſlands, having in the middle, like the Admiralty Iſlands, a principal one, extending from ſouth-weſt to north-eaſt by eaſt, about 15,000 toiſes. The iſlets which ſurround it on all ſides, except the ſouth, are very ſmall and very low.

We were 10,000 toiſes to the northward of thoſe iſlands, and to the leeward of the northern point of the great iſland, when we ſaw ſome canoes under ſail. They were behind the reefs, in which we ſaw no opening through which they could paſs, and we believed that they could not ſurmount ſuch obſtacles; but, having come cloſe to the reefs, they took in their ſail, and, going into the water, they carried their veſſels fairly over the rocks into the open ſea.

The canoe which was firſt got over ſteered towards our ſhip, and the reſt, being five in number, preſently followed; but as their motions were ſlow, they were ſoon nearer to the Eſperance, which was in our wake, and they advanced towards her. After manœuvring with much intelligence to bring their ſail into a proper poſition, they ſtill choſe to keep at the diſtance of about 100 toiſes. All the means employed to bring them alongſide were ineffectual; but they went near enough to throw ſome apples of the *ſpondias cytherea*, and ſeveral other fruits of different ſpecies of the *eugenia*, all very proper to be eaten. The bottles and bits of ſtuff given to them were received with marks of the greateſt ſatisfaction; but it was ſurprizing to obſerve that they had little value for iron.

Like all the other natives we had hitherto met with, they appeared extremely deſirous that we ſhould land on their iſland.

One of the canoes advanced towards our ſhip, while the reſt returned to the ſhore. Notwithſtanding our invitations, thoſe natives kept at the diſtance of 150 toiſes from us. They durſt not touch the different articles which we ſent them with a view to gain their confidence. Some, however, appeared deſirous that their canoe ſhould be ſteered towards our preſents in order to get poſſeſſion of them; but the ſentiment of fear prevailed among the majority.

It was noon before we reſumed our courſe. All the canoes followed us for ſome time before they returned to our iſland. That which approached the neareſt to our ſhip accompanied us with the greateſt perſeverance. It was a very large canoe, manned by thirty people, who all appeared more robuſt than the inhabitants of the Admiralty Iſlands, and of the ſame complexion.

Thoſe natives advanced towards us with very pacific views; for they were not furniſhed with arms; and, from on board the Eſperance, to which they approached much nearer than to our ſhip, no weapons were obſerved even in the bottoms of the canoes. Perhaps they thought that by this means they might induce us to land.

Thoſe canoes, though ſimilar in appearance to thoſe of the Admiralty Iſlands, were not nearly ſuch good ſailers. That which came neareſt to us had at firſt but one ſail; but they ſet another abaft it, in order to follow us. This after-ſail was much ſmaller than the forward one; and they were both in the form of a rectangle, the length of which was almoſt double its breadth. They were trimmed like the ſquare ſails of our long boats.

Their large ſail was as much raiſed as that of the canoes we ſaw at the Admiralty Iſlands, and deſcended lower, ſo as to offer a greater ſurface to the wind.

The whole of the Hermit Iſlands, including the reefs, occupy a ſpace about twelve leagues in circuit, the centre of which is in 1° 35′ 38″ ſouth latitude, and 142° 41′ eaſt longitude.

In the evening we were very near the moſt eaſtern of that little group, to which General Bougainville gave the name of Exchequer Iſlands.

It is very low, and only nine leagues W. S.W. of the Hermit Iſlands. The reefs on its north-weſt ſide form a baſin, in which there appeared to be water ſufficient for anchoring.

A great number of other iſlands were ſeen from north to weſt.

We made but little ſail during the night, while tacking in order to keep to windward of thoſe iſlands.

3d. At day-break the moſt eaſterly of the Exchequer Iſlands bore ſouth, diſtant 5,000 toiſes. It is in 1° 29′ of ſouth latitude, and 142° 26′ of eaſt longitude.

At eight o'clock A. M. we ſteered towards the weſt; and we already reckoned thirty little iſlands from the N. N. E. to the W. S. W.

We ſteered for that which appeared to be the moſt weſterly, to which we approached within about 2,500 toiſes. It is in 1° 34′ ſouth latitude, and 142° 10′ eaſt longitude.

All thoſe iſlands are connected together by reefs, which ſeem to deny all paſſage. They are very low, and covered with very lofty trees.

More iſlands came into view as we advanced; and at laſt we had ſight of the moſt ſouth-weſterly iſland of that little cluſter, which is not connected to the reſt by any reef. It is in lat 1° 39′ S. and in long. 141° 58′ E.

We lay to during the whole night.

4th. This morning, we ſaw, towards the ſouth, a low and very woody iſland, about 8,000 toiſes in extent. This new iſland was in 1° 31′ S. lat. and 140° 47′ E. longitude.

We ſoon diſcovered another iſland, ſtill leſs than, and to the S. W. of, the former, from which it is 15,000 toiſes. It is equally low, and covered with large trees.

On thoſe low iſlands near the Equator, the trees grow with aſtoniſhing rapidity and vigour;* as the atmoſphere furniſhes them at once with extreme heat and moiſture.

Although we had been, for ſome days, very near the Line, and found the heat ſuffocating, the thermometer had not yet riſen above 24½°.

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* This is more particularly true of trees, which are of a ſpongy texture, as the ſilk cotton tree, *bombax*, the ſand-box tree, *hura*, &c. But many of the hard woods, for example, the *lignum vitæ*, or *gujacum*, grow very ſlowly, and hence have been almoſt extirpated, in all the tropical iſlands, fully inhabited by Europeans.—*Tranſlator.*

We ſaw large trees floating, which had been detached from the low iſlands by the waves. One of thoſe trees adhering to the prow of our ſhip, for ſome time retarded her motion.

8th. At five o'clock P. M. being upon the Equator, in 135° 4′ E. long. we ſaw a very conſiderable water-ſpout, forming in the ſouth-weſt, at the diſtance of about 2,000 toiſes: although the air about us was very tranquil, the waves were foaming with agitation, at the place where the water-ſpout originated, over which a very ſmall cloud hovered, apparently at the diſtance of a few feet. This phœnomenon was in the form of two very elongated cones, joined at their ſummits, the baſe of one being upon the ſea, and that of the other loſt in a very thick cloud.

The clouds appeared to me to be agitated by a whirlwind, which having held a great quantity of water ſuſpended, diſcharged it again in torrents. Perhaps all water-ſpouts are formed in this manner. If, as ſome natural philoſophers alledge, a water-ſpout carried up the ſea-water, in a great body, it ought to be as ſalt in the moment of its deſcent, as in that of its aſcent, which does not ſeem to accord with obſervation. A perſon, worthy of credit, who ſaw two water-ſpouts fall upon a veſſel, aſſured me that they diſcharged freſh water. On the contrary ſuppoſition, it would not be eaſy to explain this phœnomenon.*

9th. The limpidity of the ſea-water was very much diminiſhed, during this day, by a *fucus,* the filaments of which were very looſe and ſhort. I met with it again on the 6th of September, and ſhall afterwards ſpeak of it more particularly.

We found ſharks very numerous in thoſe parts. We caught ſeveral of the ſpecies *ſqualus carcharias,* which is the moſt extenſively diffuſed through the ocean. One of them, of a moderate ſize, aſtoniſhed us by its voracity. Although lacerated by four hooks, which it had taken within the ſpace of half an hour, it followed us, till it was hooked ſucceſsfully.†

Being near New Guinea, and but eight minutes diſtant from the Line, the thermometer only indicated 25°, although we ſuffered a heat much more oppreſſive than that which is experienced in Europe, when the thermometer is at the ſame elevation.* In obſerving that that inſtrument is a very uncertain meaſure of ſenſible heat, I ought to apprize the reader that *I always ſpeak of the mercurial thermometer of Reaumur.*

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* It is not very eaſy to give a ſatisfactory explanation of this phœnomenon, upon any principles; though thoſe of electricity ſeem to afford, or rather to promiſe, the moſt probable ſolution of it.—*Tranſlator.*

† I knew a ſimilar inſtance, in one of thoſe monſters, which was eighteen feet in length. It was ſuppoſed to be the ſame which had devoured a man, ſome days before it was taken. Its liver hung up in a net dropped about ten gallons of oil.—*Tranſlator.*

11th. This day, the Eſperance ran foul of us, being the ſixth accident of this kind, ſince we left Europe. She broke the foot rope of her ſpritſail yard, on the fore part of our rigging. Fortunately we kept the frigates aſunder, by placing a boom between them. As it was a dead calm, we put out two boats, to tow the ſhips ſtill farther from each other.† The boats, at the ſame time, obſerved the direction of the current, which carried us to the N. N. E. at the rate of half a knot in the hour.

12th. At day-break, we had ſight of the largeſt of Schouten's Iſlands, bearing S. ¼ S. W.

The ſurface of the water was violently agitated, in a large ſpace, through which the Eſperance had occaſion to paſs, in proſecuting her courſe. Fearing that it was cauſed by breakers, ſhe put about; but the deception ſoon ceaſed. This motion was produced by a large ſhoal of fiſhes, ſwimming near the ſurface, and which was purſued by a great number of birds.

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* I have very ſenſibly experienced the ſame effect myſelf. Is it owing to the greater quantity of water, which the air, *conſtantly heated*, holds in ſolution in tropical climates?—*Tranſlator.*

* The difficulty of keeping ſhips aſunder in a calm, is commonly, and very properly, given as an inſtance of the mutual attraction of bodies.—*Tranſlator.*

Although it was now the ſeaſon of the eaſtern monſoon, the winds blew, for four days, from the ſouth-weſt to the north-weſt; but on the 14th, they reſumed their ſouth-eaſt direction.

The ſame day, we ſaw a little iſland, very near New Guinea, and which is 10,000 toiſes diſtant from the iſland of Providence. That little iſland is in 2° 18′ 48″ S. lat. and 133° 8′ 47″ E. longitude.

The inceſſant and great heats in thoſe latitudes, accelerated the decompoſition of our water, which was ſo much the worſe, as that to the uſe of which we were by that time reduced, was ſomewhat brackiſh. For the water which we firſt took in at Carteret harbour, was taken up too near the ſea, and had been preſerved, notwithſtanding its bad quality. Beſides, that the ballaſt may not be diminiſhed, it is uſual to fill the empty butts with ſalt-water, which ought to be well rinſed out, before they are again filled with freſh. But the boatſwain's mate, who had the charge of the water, did not take ſo much trouble. It was eaſy to free the water from its inflammable air, by the machine, which I have already deſcribed; but it always retained a brackiſh taſte.

18th. A ſtorm had howled, for a part of the night, on the coaſt of New Guinea, and had given us a great quantity of rain. The ſky ſeemed to announce a tempeſt; but the ſtorms, near the Equator, are more menacing, than really formidable,* and we ſoon enjoyed a very clear ſky.

We ſaw a fine chain of mountains which ranged towards the eaſt. The higheſt of them appeared to be at leaſt 750 toiſes in perpendicular altitude. The large trees, with which they were covered, added greatly to the picturеſque appearance of the country.

19th. Being in 0° 18′ ſouth latitude, and 430° 52′ eaſt longitude and 1,000 toiſes diſtant from New Guinea, we ſounded with one hundred fathoms of line, but found no bottom.

The firſt indication we had of the inhabitants of that iſland, was the ſmoke of two fires, which roſe from among the large trees near the coaſt.

We were then near the promontory of New

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* Should not the Author have excepted, at leaſt, the hurricanes at Amboyna, mentioned below (Oct. 14.) not to ſpeak of thoſe, which too often rage in the Weſt Indies?—*Tranſ.*

Guinea, which is called the Cape of Good Hope, and which we doubled at the diſtance of 1,000 toiſes. It is 0° 20′ ſouth latitude, and 130° 34′ eaſt longitude. We were ſurprized that Foreſt, in other reſpects an accurate navigator, ſhould have ſo much miſtaken its true latitude; for that which he gave, differed from ours more than 20′ towards the north.

The variation of the compaſs, after a gradual diminution was now but 1° 30′ eaſt.

We were prevented by calms from coaſting along New Guinea, till a ſea-breeze ſprang up, about three o'clock P. M. The ſhore was generally broken and rocky: but we obſerved ſome ſandy ſpots, of a gentle declivity, which preſented convenient landing places.

21ſt. On the morning of this day we were very near the two little iſlands of Miſs Palu. The leaſt of them is in 0° 20′ ſouth latitude, and in 130° 7′ eaſt longitude. The largeſt is in 0° 19′ 57″ ſouth latitude, and 130° 4′ 30″ eaſt longitude.

23d. We ſteered cloſe to the ſhore of New Guinea, with an intention to enter among the Moluccas, by Watſon's Strait. It would have been agreeable to us to explore that ſtrait, which is much leſs frequented than thoſe further to the weſtward. Beſides, we would have had the advantage of keeping more to the windward, than by paſſing through Pitt's Straits, which the continuation of the ſouth winds induced us to take.

About eleven o'clock in the morning, being to the north-weſt, and very near it, we found that we were upon a ſhoal, which extends more than 5,000 toiſes from the coaſt of Bantana. We were ſtrongly intangled in it, when the lead indicated eight fathoms water, rocky bottom. It was a bank of coral, which the tranſparency of the water diſplayed in all its whiteneſs. We were obliged to go about, in order to extricate ourſelves from ſo dangerous a ſituation.

We entered the ſtraits about half an hour paſt two P. M. A canoe which we ſaw at the entrance near the coaſt of Bantana, at one time appeared to us to be making for the Eſperance; but it ſoon haſtened towards the land.

Having lain to for ſome time to wait for the Eſperance, we obſerved that the current carried us very rapidly through the ſtrait. The tides very much influence thoſe currents, which, about midnight, and early the next morning, were very conſiderably abated.

Five canoes were ſailing along the eaſtern ſhore, at a good diſtance from one another. We obſerved, that one of them had a flag hoiſted, which we took to be Portugueſe. The wind was carrying us towards the coaſt of Salwaty, and hindered us from ſteering for thoſe canoes. Beſides, none of them ſeemed inclinable to meet us. Theſe people did not know our intentions; and perhaps they were apprehenſive that we were of the number of thoſe Europeans, whoſe avarice induces them to employ every ſtratagem to entrap them, in order to make ſlaves of them.

High lands, every where covered with large trees, border the Straits of Pitt.

We lay to all night. At nine o'clock we heard from the weſtern ſhore the voice of ſome natives, who ſeemed to addreſs us. At the ſame time a fire appeared on the weſtern point of the entrance, about the place from whence a canoe came off, when we entered the ſtrait.

24th. At day break we were very near Paſſage Iſland, and we obſerved on the coaſt of Bantana, a little village, the inhabitants of which ſeemed to view us with much indifference.

The Strait of Pitt extends about 2,5000 toiſes from W. S. W. to E. N. E., and its mean breadth is about 5,000 toiſes. On heaving the lead from on board our ſhip, no bottom was found with ſeventy-five fathoms of line. But the boat, at 100 toiſes from the ſhore, had from fifteen to eighteen fathoms of water, the bottom being calcareous rock.

We went about, in order to avoid ſome ſhoals which we obſerved, on leaving the ſtrait, very near the coaſt of Bantana. But ſeveral perſons were of opinion, that there was water enough to carry over both the ſhips.

The opening of the ſtrait on this end is near 15,000 toiſes in breadth. We obſerved in it two little iſlands, very near the Bantana ſhore.

The weſtern point of Salwaty was found in 1° 2′ 10″ S. lat., and 128° 32′ E. longitude.

The conſtancy of the wind from S. S. E. deprived us of all hope of getting round Mixoal iſland to the eaſtward. We were therefore obliged to endeavour to make the north of Ceram, in order to get round, by the weſtern extremity of that iſland, to Amboyna.

About ſix o'clock P. M. we were 15,000 toiſes diſtant from the iſland of Popo, which bore S. 6° W.

The next day we ſteered with that iſland on our ſtarboard, diſtant about 8,000 toiſes. It preſented a flat ſurface, in the midſt of which roſe three hills, near one another. We had a near view of ſome little iſlands to the ſouth-weſt, and which extend nearly from the north-eaſt, to the ſouth-weſt.

The iſland of Popo is in 1° 9′ 14″ S. lat., and 127° 40′ E. longitude.

We ſaw the iſlands of Canary and Mixoal, with part of the little iſlands which ſurround them.

This morning we loſt a young ſailor of the name of Pichot, who died in a ſtate of *maraſmus,* the conſequence of a dyſentery, under which he had laboured for ſix months.

26th. This day the poſition of Canary Iſland was found to be in 1° 51′ 36″ S. lat., and 127° 35′ E. longitude.

27th. Our ſhip was this day ſurrounded with a kind of whales, which were from twenty to twenty-five feet in length. They were ſufficiently numerous to afford fiſhers, by their oil, an ample compenſation for their labour and expence.

29th. Very early this morning we came in ſight of the lofty mountains of Ceram, which extending from the S. E. to the S. S. W., preſented us with a very fine landſcape.

Such high mountains afford effectual protection to the independence of their inhabitants. Hence it is, that only a ſmall number of the natives ſettled on low parts of the iſland, near the ſea, endure the tyranny of the Dutch.

September 1ſt. The clouds having been entirely diſſipated from the land of Ceram, we enjoyed the magnificent proſpect of ſeveral chains of mountains running parallel to each other, in the direction of eaſt and weſt. The fine valleys which ſeparate them, ſupport a luxuriant vegetation, and have the appearance of the greateſt fertility.

We obſerved many fires on the iſland of Ceram, ſome of them upon one of the higheſt mountains, which proves that their ſummits are frequented by the natives. That mountain appeared to us to be at leaſt 1,200 toiſes in perpendicular elevation.

Availing ourſelves of the calm, we ſent a boat to aſcertain the direction of the current, which then ſet to the N. E. ¼ E. at the rate of three quarters of a knot in the hour. As, among thoſe iſlands, the currents depend very much upon the tides, it may be ſuppoſed that their force and their direction vary extremely.

On the approach of night we were about 1,000 toiſes from the coaſt of Ceram, which becoming leſs elevated, ſeemed to indicate leſs depth of water on its coaſt. The lead, however, did not reach the bottom with thirty-ſeven fathoms of line.

Soon after this, we ſaw on the land ſide, ſeveral fires, which appeared to have been kindled by fiſhermen, in order to decoy the fiſh.

2d. About noon we deſcried the iſland of Bonoa,

noa, extending from W. 20° S. to S. 48° W. at the diſtance of near 20,000 toiſes. That iſland is in 2° 58′ S. lat., and 125° 56′ E. longitude.

We took care frequently to heave the lead, when we were near the land; but we had no ſoundings with ſixty-ſix fathoms of line.

In the evening, a ſtrong land breeze carried us into the channel between the iſlands of Ceram and Bonoa, in which, by moon light, we obſerved three ſmall iſlands. Although it was quite calm, the current carried us almoſt to the other extremity of the channel.

About midnight, while the air ſcarcely moved, the waves which foamed very near our ſhip, made us apprehenſive that we were approaching to breakers. But our alarm was of ſhort continuance, having been only occaſioned by the rapid current of the tide, which followed the direction of the channel, and oppoſed our progreſs.

5th. We were at a ſmall diſtance from Kilang. The General intended to paſs between that iſland and Ceram; but the channel, which at beſt is but ſtrait, appeared to be additionally obſtructed by reefs and a ſand bank. We therefore made good our paſſage, very cloſe to the weſtward of Kilang. The country preſented beautiful plantations of cocoa-nut and banana trees, encircling a charming village.

We then continued our courſe between Kilang and Manipa.

About eleven o'clock A. M. the current of the tide raiſed a rapid ſucceſſion of waves, tumbling over each other, in wild conflict. We were, in fact, ſeveral times witneſſes of that phœnomenon, which Dampier and Bougainville compare to the current of a large and very rapid river.

About four P. M. we had doubled the iſland of Manipa, which is not more than 2,500 toiſes in extent from north to ſouth. Though very mountainous, that iſland appeared to be populous, and many canoes were plying along its ſhore. Its latitude is 3° 21′ S., and its longitude 125° 47′ E.

The iſland of Kilang is in latitude 3° 17′ S. and longitude 125° 31′ E.

4th. A breeze which aroſe in the offing, at ten o'clock A. M. favoured our progreſs towards the ſouth; and we ſoon had ſight of a part of the weſt coaſt of Amboyna, bearing S. S. E.

The ſouth wind afterwards oppoſed us, and obliged us to tack.

5th. A very freſh breeze from the ſouth-eaſt put an end to our hopes of gaining our intended anchoring place this day. Our ſcorbutic patients, whoſe number was rapidly increaſing, and whoſe condition became daily more alarming, made us ardently wiſh for a favourable wind. Their diſorder had been greatly influenced by the perpetual rains at Carteret harbour; and moſt of them were afflicted with great pains in the loins.

One of their firſt ſymptoms was the appearance of whitiſh tubercles, frequently as large as a pullet's egg, in different parts of the body, particularly on the arms, and which were commonly ſucceeded by others on the lower extremities.

It was remarkable that the ſkins of thoſe patients were not diſcoloured with what are called ſcurvy ſpots, as that diſeaſe, in hot climates, rapidly ſuffuſes the cellular membrane with a lymphatic humour, which ſcarcely alters the colour of the ſkin.

I muſt farther obſerve, that, although ſalted proviſions be one of the principal cauſes of the ſea-ſcurvy, yet two of our men, who did not ſubſiſt on ſuch proviſions, were violently attacked by that diſorder.. But one of them worked in the hold, the humid and ſpoiled air of which is a powerful cauſe of the malady.

By means of tacking, we came near enough the weſtern extremity of Amboyna, to allow us to enter the road in the night. By the direction of Valentin's plan of it, we kept along its eaſtern ſide, at the diſtance of about 510 toiſes.

As ſoon as we had paſſed Portugueſe-bay, we brought to, and waited till day light ſhould diſcover to us a proper place to anchor in.

6th. The Eſperance had not made ſuch progreſs as our ſhip; but was 5,100 toiſes to the ſouth-weſt of us, at ſeven o'clock this morning, when we were within a ſmall diſtance of the principal eſtabliſhment in the iſland.

Here I met with the *fucus*, which I had before obſerved near New Guinea. It reſembled very fine tow, croſſed by little pieces, ſomewhat more than an inch in length; the filaments are as fine as hairs. They are frequently ſeen united into a ſort of bundles, and are ſo numerous that they ſully the water in the road.

General Dentrecaſteaux ſent his ſecond lieutenant to wait upon the Governor of Amboyna, in order to aſk permiſſion to ſtop at his iſland. The Governor immediately ſummoned the Council, and gave us leave to come to an anchor; but, as the act which the ſecond lieutenant preſented to them, in the name of the Commander, had not yet been communicated to them by the government of Batavia, they were inclined to impoſe conditions on us, to which we could not conſent. Yet it was not difficult to make them ſenſible, that we had anticipated, by ſeveral months, the arrival of their diſpatches from Europe, which ſeldom reach Amboyna, till eighteen months after their date. It appeared to us, that their caution originated in the deſire of ſaving themſelves from being blamed by the government of Batavia, to which that of Amboyna is ſubordinate; for as ſoon as they had adopted regulations in that reſpect, they rendered us every ſervice in their power.

We found that little iſland much better provided than we could have expected, with every article neceſſary for the proſecution of our voyage.

A captain in the ſervice of the Dutch Eaſt India Company was ſent by the Governor, to point out to us a proper anchoring place; and having made ſome tacks, we let go our anchor about half an hour paſt one P. M. in twenty-five fathoms water, bottom mud and ſand. The tower of Victory Fort bore from us E. 9° N. the neareſt redoubt W. 35° S. and the weſtern point of the entrance of the road, W. 26° 30′ S. We were about 340 toiſes from the landing place, a wooden wharf, near which there is water for large ſhips. One of the Company's ſhips then lay at it, taking in a cargo of cloves.

At the ſame time there were in the road eighteen veſſels under Dutch colours; but only one ſhip: moſt of the reſt were brigs and ſloops.

The Eſperance came to an anchor half an hour after us, and bore N. E. ¼ N. of our poſition.

CHAP. VIII.

Stay at Amboyna—A Cabin-Boy belonging to the Recherche, is accidentally drowned—Viſit to the Governor—Different Excurſions into the Interior of the Iſland—One of the Naturaliſts falls dangeroufly ill—Deſcription of his Diſorder—Agreeable Liquor furniſhed by the Sago Palm—Sugar extracted from it—Uſes of the different Parts of that valuable Tree—Means by which the Flying Dragon ſuſtains itſelf in the Air—Explanation of Maté, *which preſerves the Crops from being plundered—A Dutch Sailor flees into the Woods for fear of being ſent to Batavia—Dextrous Manner of catching the* Cancer Carcinus*—Cabins of the Natives of Amboyna—Their Cloathing, &c.—Their Method of procuring Fire; and of Fiſhing in the Night—Culture of Nutmegs and Cloves—A long Bamboo cut ſo as, with a briſk Gale, to emit a very agreeable Sound—Fiſheries of the Inhabitants—A Sago-Work—Extraction of its fæculæ—Diſeaſes common at Amboyna—Various Reflections on the Iſland and its Inhabitants.*

AT half an hour paſt three o'clock we ſaluted the place with nine guns, and the ſame number was immediately returned.

The Commander had engaged all his officers to accompany him, about five in the evening, on a viſit to the Governor. As I knew nothing of this appointment, I landed, along with ſome perſons belonging to our ſhip, to view the town. It is encircled with gardens, in which trees are chiefly cultivated; becauſe they favour the indolence natural to man in a ſultry climate, and afford him a profuſion of fruits, with little other trouble than that of gathering them.

Beſides the kind of wild bread-fruit tree which we met with there, the inhabitants aſſured us that there was another which bore a fruit, the ſeeds of which all miſgive; but that the fruit was only of a middling ſize, and the tree did not produce a great quantity of it.

Several kinds of banana trees, and many varieties of oranges grow in thoſe charming gardens; and they produce delicious guavas, papaws, and different ſpecies of pine-apples *(anones)*. We obſerved there ſome ſpecimens of the *lawſonia inermis*, which roſe to the height of ten or twelve feet.

Different odoriferous plants were profuſely ſcattered around. We there found the *chalcas paniculata*, the *michelia champaca* and *tſiampaca*, and ſeveral ſpecies of the *uvaria*. The Arabian jeſſamine, *nyctanthes ſambac*, riſing amidſt thoſe charming trees, mixed its ſweet odour with their delightful perfumes.

On our return into the town, one of the proteſtant miniſters conducted us to his houſe, where he entertained us with ſeveral ſorts of ſpirituous liquors. But limpid water, juſt drawn from the ſpring, was the moſt agreeable draught to perſons, who had long been confined to brackiſh water and ſalted proviſions. This excellent miniſter appeared to be much ſurpriſed at our being regaled at ſo ſmall an expence. He informed us that earthquakes were frequent at Amboyna, and that ſome years ago one, among others, had been very forcibly felt; that it was accompanied with a hurricane which continued nearly three days, during which time the ſea had overflowed, and inundated the ground on which the town is built.

This calamity is the moſt to be dreaded at the change of the monſoons, and particularly at the commencement of the weſtern monſoon, which takes place, in thoſe latitudes, in the month of November.

7th. One of the cabin-boys, of the name of Gabriel Abalen, who ſerved the table of the marine officers, diſappeared on the night of the 7th. He had been obſerved to be on board all day; but after dark was called ſeveral times in vain. He was a good-natured young man, and in general very temperate; but, during that day, had drunk ſo much ſtrong liquor, as to juſtify ſerious apprehenſions concerning him. He probably fell overboard, and it was known that he could not ſwim.

All of us had much need of remaining on ſhore, in order to recover our ſtrength; and the Governor gave us leave to take lodgings in the town.

8th. It was a matter of importance to the naturaliſts to be acquainted with the Governor of Amboyna, in order that he might facilitate the reſearches which formed the object of their miſſion. It was, no doubt, owing to pure forgetfulneſs, that the Commander of our expedition did not make us acquainted with the hour of his firſt viſit to the Governor. But I requeſted him to favour us with an introduction, and we accordingly ſet out for that purpoſe, about half an hour paſt ſix. M. Bourguelles and M. Van Smiehl preſſed themſelves upon us as our interpreters.

M. Van Smiehl was a German Baron, who had lately arrived in the iſland. He was then but aſpiring, as he expreſſed it, to be a ſervant of the Dutch Eaſt India Company. In the ſequel, we had reaſon to felicitate ourſelves that he had not much influence on the Governor; for he had attempted to perſuade him, that the Regency of

Batavia would not approve of our ſhips being allowed to remain at Amboyna. Yet the Baron very well knew that, in the preceding year, two ſmall Engliſh veſſels, fitted out at Bombay for the Pelew Iſlands, had been received without the leaſt difficulty. They had firſt put in at Bourou; but, finding no proviſions there, had been permitted to ſhip ſome at Amboyna; and thoſe veſſels were far from having ſo good a title as we had to ſuch indulgence. But, perhaps, the appearance of foreign veſſels in that road, for two years ſucceſſively, made it neceſſary for the Governor to take every precaution, in order to ſave his reſponſibility. He received us very favourably; but we were unhappy that he appeared in his ceremonial dreſs on our account; for he was oppreſſed with heat, under a very heavy coat of black velvet. Such garments are extremely incommodious near the Line, but the Dutch Governors wear them, as a prerogative annexed to their ſtation.

Some refreſhment was offered to us. I wiſhed for nothing but water, and I poured out that which appeared the moſt limpid; but its ſaltiſh taſte made me think that the domeſtics had, by miſtake, brought me ſome medicinal water. It was in fact Seltzer-water, which the Dutch here uſually drink as an agreeable potation; and it coſts them as much as the beſt rheniſh wine. Surely they were not aware of our repugnance to ſuch a beverage ; yet they might have ſuppoſed that, in a torrid climate, and after a long privation of freſh proviſions, we would not be very fond of ſwallowing ſalt water.

The General propoſed to introduce us to the members of the Council alſo, to which we readily aſſented; and they gave us a very kind reception.

10th. As we intended to remain at Amboyna, for a month at the leaſt, I had conveyed to the place where we were to lodge, many things neceſſary for the preparation of the different productions, which I intended to collect in the iſland. The other naturaliſts and I had agreed to live in the ſame houſe. It was already prepared for our reception, and our things had been carried into it, when, to our great aſtoniſhment, we found it occupied by ſome officers from the two ſhips, who, however, knew very well that we had taken the houſe; but the man who had the key thought that they belonged to our party. The gentlemen made themſelves very merry with this pitiful trick, of which we did not think them capable; but it was eaſy for us to find other lodgings.

Our apprehenſions reſpecting the cabin-boy, who had diſappeared three days before, were but too well founded. His body had remained at the bottom of the water all that time; but, about half an hour paſt two in the afternoon, it was ſeen floating near the ſhip. This ſmall diſtance from the place where he had fallen into the ſea ſeemed to prove, contrary to the opinion of moſt of the Europeans ſettled at Amboyna, that the rapidity of the currents in the road is confined to the ſurface merely, and does not reach the bottom, a circumſtance which, for other reaſons, appears to me very probable. In fact the currents are determined by the tides, pouring their waters into and out of the road, only to reſtore their equilibrium, which, in theſe circumſtances, is diſturbed to but a ſmall depth from the ſurface.

This young man was much regretted by all the ſhip's company. Many exclaimed againſt the careleſſneſs of thoſe, who had had the charge of him in his early years, in neglecting to inſtruct him in ſwimming. A few leſſons in that art would have ſaved the lad's life; and it is to be wiſhed that his fate may ſerve as an example to others; for I have obſerved with aſtoniſhment, that many of the ſailors cannot ſwim.

Our obſervatory was this day eſtabliſhed, in the weſtern part of the town. As it could not be ſeen from the ſhip, it was found inconvenient to be obliged to go upon the beach, in order to compare the motion of the watches with that of the clocks.

This weſtern part of the town, in which we alſo reſided, formed the Chineſe quarter, in which there are few natives of the iſland, and only one Dutchman. The reſt of the Dutch inhabit the centre of the town, or its eaſtern part.

Our ſtrength was ſo reduced, that we were obliged to content ourſelves, for ſome days, with ſhort excurſions from the town.

We viewed the garden of the Company, where there is nothing remarkable but a very convenient bath, which the Governor viſited regularly every third or fourth day. It is ſupplied with very pure water from a neighbouring hill. Near it is another bath appropriated to the uſe of the women.

The Dutch at Amboyna are in the habit of bathing every third or fourth day, when they carefully avoid expoſing themſelves to the exceſſive heat, which prevails from eleven in the morning till three in the afternoon. Indeed they are ſeldom ſeen abroad during thoſe hours on other days. For our parts, we had not leiſure to take ſo many precautions; and accordingly two of the naturaliſts were attacked with dangerous diſorders.

We many times endeavoured to penetrate into the large plantations of ſago trees; but the water with which they are floated often forced us to abandon the attempt. That tree, ſo uſeful for the ſupport of man, forms a part of the riches of the iſland.

The flat ſtrand, at low water, is covered in many places with a multitude of crabs, of the ſpecies denominated *cancer volans,* which then emerge from the holes which they dig in the ſoft ground. This ſingular creature, one of whoſe claws is ſometimes larger than its body, often becomes the prey of birds. I believe the facility with which its claws are disjoined from its body is the reaſon why one of them is almoſt always much larger than the other.*

A little excurſion to the ſouth of the town, near the quarter inhabited by the Europeans, brought us to the tomb of Rumphius. The ſimplicity of this monument reminded us of the manners of that able obſerver of nature. It was encircled with the beautiful ſhrub, known by the name of *panax fruticoſum.*

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* The great diſproportion of the claws to the body, and to one another, is more probably a diſtinctive characteriſtic of this curious ſpecies of crab. I have ſeen many thouſands of them; but never an individual in which this diſproportion did not exiſt. Places ſituated to leeward of the muddy ſalt-flats, in which thoſe creatures breed, are juſtly reckoned extremely inſalubrious.—*Tranſlator.*

We ſaw, in the hands of ſome natives, the pretty *lorry* of the Philippines. Theſe, however, were not procured from ſo great a diſtance, but from ſome iſlands a little to the eaſtward of Amboyna, and chiefly thoſe of Arrou. They had alſo another ſpecies of the lorry, which breeds in the foreſts of Amboyna, and which differs from the former in its colours, which are leſs vivid, and not ſo beautifully blended. Moſt of thoſe parrots pronounced ſome words of the Malayan language.

Towards noon, the heat of the ſun affected us with ſuch a head-ach, as forced us almoſt always to retire to ſome ſhade, in order to defend ourſelves from his direct rays.

Very early on the morning of the 15th we proceeded towards the weſt; but about mid-day the heat was ſo very oppreſſive, that we were obliged to return home.

The naturaliſt who did the duty of chaplain, became ſo dangerouſly ill, that we could not leave him a ſingle moment for four ſucceſſive days. The ſymptoms of the malignant fever, with which he was attacked, were very dreadful. His ſtools were extremely fetid, and accompanied with frequent vomitings, ſtarting of the tendons, a ſmall pulſe and great proſtration of ſtrength. The nervous affection of the patient came to ſuch a height, a height, that every evacuation was attended with a degree of weakneſs which deprived him of recollection. His lower extremities were affected with violent ſpaſms, which occaſioned very great pain.

Although the diſeaſe was exceedingly infectious, no danger ought to have prevented us from paying to our diſtreſſed ſhip-mate, all the attention which he had a right to expect from our friendſhip; and accordingly we ſuſpended our reſearches in natural hiſtory, till we ſhould ſee him out of danger.

16th. The next day the ſymptoms became ſtill more alarming. The pulſe more and more depreſſed, with frequent intermiſſions in its motion, the hiccups, ſometimes continued for half a quarter of an hour, a great proſtration of ſtrength and an appearance altogether diſcompoſed, made us entertain ſerious apprehenſions for the life of our patient.

In the night, the ſymptoms were equally alarming.

About break of day, on the 17th, the pulſe ſenſibly increaſed, and a certain flexibility in the ſtroke of the artery, afforded us the happy preſage of an abundant perſpiration, which accordingly ſucceeded in a few hours, and ſnatched our friend from the gates of death.

He was in a ſtate of convaleſcence not more than eight days.

This ſpecies of fever, occaſioned by ſtagnant waters, in a tropical climate, was treated with diluting draughts and antiſpaſmodics. Ether given frequently, and in ſmall doſes, had a tendency to ſupport the ſtrength of the patient, while it moderated the violence of the ſymptoms.

M. Hoffman, ſurgeon of the military hoſpital, viſited our patient ſeveral times a day. Our chief ſurgeon alſo regularly attended him.

M. Bourguellés, the Company's treaſurer, perſuaded the Commander of our expedition, that the united ſkill of all the phyſicians in Europe, was not equal to that of a Malay doctor, in the treatment of ſuch diſeaſes. One of the moſt able of them was therefore called in. He did not propoſe to perform the cure by internal remedies; for he gave the patient nothing to take; but after rubbing ſlightly the ſkin of different parts of the body, and properly adjuſting the lower extremities, he pronounced, with a myſterious air, ſome words, which he ſeemed to addreſs to the Supreme Being. Then he conjured, as we were told, the evil ſpirits, whom thoſe iſlanders look upon as the authors of diſeaſes. M. Bourguellés was overjoyed to ſee the doctor operate in his beſt manner, in order to obtain the deſired ſucceſs.

We allowed him to do every thing, from which no bad conſequences could reſult; but it was our buſineſs to interrupt his operations, when he was proceeding to ſouſe the patient, with a pail of water, newly drawn from the well. It was but a very little time before the critical ſweat, which terminated in his recovery.

The Malay doctor doubtleſs placed all his ſcience in this experiment; but he did not know that it would have ſuppreſſed the critical perſpiration, of which the pulſe had given us the happy preſage.

Our patient was ſufficiently recovered on the 19th, no longer to require ſuch aſſiduous care. We therefore proceeded weſtward into the country. After having long followed the courſe of a little river, which runs into the harbour at a ſhort diſtance from the town, we were returning with a load of fine plants, when, at the approach of night, we met ſome native fiſhermen who had been equally fortunate, in their way, and who were proceeding to broil their fiſh. We had the pleaſure of ſeeing them light up their fire, by means of two pieces of bamboo, rubbed againſt each other, after being cut in a manner which I ſhall preſently explain.

20th. We employed half of the day in an excurſion towards the ſouth; and we made haſte to aſcend a hill, where we found ſome young natives ſetting ſnares to catch birds. They conſiſted of hairs formed into nooſes and tied to a very long rope, which lay on the ground, and was faſtened to a wooden peg driven into the earth.

I ſuppoſed that they made uſe of baits to attract the game; but they told me that they did not, and at the ſame time confeſſed, that they caught but few birds.

At the bottoms of the hills, we obſerved the fine palm which the natives call the ſago tree, and which Rumphius has deſcribed (vol. i. fig. 13,) under the name of *ſaguerus*. From the pedicles of the boughs *(regimes)* of this tree, when newly cut, a very agreeable liquor oozed, which was received in pieces of bamboo, tied to their extremities. In ſo hot a climate, this liquor very quickly ferments, and would become acid, if the inhabitants did not add to it ſome of the wood of the *ſoulamea*, which, by the fermentation, is entirely freed from its bitter taſte, and preſerves the liquor a long time.

One of theſe palms may yield daily, for above two months in the year, from a gallon and a half to two gallons of this liquor. In order to facilitate its efflux, the inciſions of the pedicles are daily renewed.

As the heat of the ſun favours the aſcenſion of the ſap, one would naturally ſuppoſe that the tree would yield a greater quantity of this liquor during the day than during the night. The fact, however, is quite otherwiſe, for the humidity which is abſorbed by the leaves in the night, mixing with the juice, increaſes its apparent quantity ; but that which is obtained during the day contains much more of the ſaccharine principle, which is to be extracted.

This extract forms a kind of ſugar, which the Malays call *goula itan* (black ſugar.) It is commonly met with in ſmall loaves, which retain the ſhape of the hemiſpherical veſſels, in which the redundant water is evaporated. Its colour approaches to that of chocolate ; but it is deeper. On breaking thoſe little loaves, there appear, eſpecially towards the centre, yellowiſh ſhining grains, a circumſtance which renders it probable, that there would be no great difficulty to bring it to the degree of cryſtallization, neceſſary to convert it into ſugar of a good quality. Such as it is, the natives ſcarcely uſe any other, that which is extracted from the ſugar-cane being ſold for ſeven or eight times the price.

From this almoſt excluſive uſe of the goula itan, one would be apt to conclude, that the ſugar-cane was not produced in the iſland. Almoſt all the inhabitants, however, devote ſmall portions of their gardens to this valuable plant; but they content themſelves with regaling on its juice, which they expreſs by maſtication.

In addition to the agreeable and wholeſome liquor afforded by this fine palm, the leaves (or *limbs,**) are adorned, towards the baſe, with filaments which the natives convert into good cordage. From the form and black colour of thoſe filaments, one would take them, at the firſt ſight, for horſe-hair, but they are almoſt twice as large. The young fruit, prepared with ſugar, makes an excellent comfit.

Some fractures in the earth near the bottoms of the hills, diſcloſed to our view the hard, clear, grey *ſteatite,* which forms their baſes.

22d. In an excurſion which I made to the ſouth-weſt, I found many rocks of very friable *ſchiſtus,* of a light grey colour, and near a very hard ſpecies of *aſbeſtos.*

One would be apt to imagine, that, in an iſland ſo little removed from the Equator, the preparation of the ſubjects of natural hiſtory would be ſingularly facilitated by a quick deſiccation. The contrary, however, was ſo much the caſe, that I was obliged to make great exertions to ſave the fruits of my botanical harveſt from ruin. In fact, the air, in paſſing over the waters of the ocean, becomes charged with a degree of humidity, which greatly injures ſuch preparations, and the heat of the climate quickly deſtroys thoſe plants which are moſt retentive of their juices.

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* The French word is *feuilles.* But the Engliſh uſe the word *limb,* for the ſhoots of the cocoa-nut tree, the cabbage tree and other ſpecies of palm; and very properly: they are too large to be called leaves, and, being deciduous, cannot be called branches, in the ordinary ſenſe of that term. —*Tranſlator.*

23d. At four in the morning, we directed our courſe towards the eaſt.

We had ſeveral times to croſs the beautiful rivulet, known by the name of Vai-Tomon, which enters the ſea a little to the eaſtward of the town. Its banks were covered with a great number of plants, among which are ſeveral ſpecies of the *juſſiæa*. I obſerved on the ſurface of the brook, the ſpecies diſtinguiſhed by the name of the *juſſiæa tenella*; and I admired the precaution taken by nature for its preſervation, in diſpoſing along the ſtalk large oval tubercles, filled with air, to make the plant ſwim. Thoſe veſicles are but little different from the air-bladders, with which moſt fiſh are furniſhed; only in this inſtance, each veſicle is compoſed of a great number of ſmaller ones; becauſe otherwiſe they would be in danger of being deſtroyed, by the ſhocks of the different bodies brought down by the ſtream.

Notwithſtanding the ſhade of the ſurrounding trees, the *elæcarpus monogynus* was covered, even to its loweſt branches, with fine flowers, elegantly figured. In thoſe ſolitary foreſts, where the ſun does not eaſily penetrate the thick foliage, it is aſtoniſhing to obſerve the vivid colours of ſeveral kinds of paraſite plants, of the genus of *orchydes*, moſtly cleaving to the trunks of the largeſt trees. In the leaſt crowded ſpots, the tree of the *aralia* claſs, deſignated by the name of the *cuſſonia thyrſiflora*, adorned the foreſt with their large palmated leaves.

Among the great number of lizards which were buſily purſuing inſects, I admired the agility of that called the flying dragon (*draco volans*, Linn.). During the greateſt heat of the day, that pretty animal rapidly darted from branch to branch, by extending two membranes in the form of wings, by means of which it ſuſtains itſelf for ſome time in the air. Nature having denied it the muſcles neceſſary for the vibration of this kind of wings, it can only ſpread them out to counteract the rapidity of its deſcent. With its hind feet it gives its body an impulſe, which not interfering with its deſcenſive motion, ſometimes carries it forward a few toiſes, and to a height nearly equal to that of the place whence it darted.

In my return, I wiſhed to take ſome branches from the different vegetables which grew in a garden belonging to a native of the iſland. But the guides who accompanied us, apprized me of the danger to which they believed I would expoſe myſelf. Pointing to a little ſhed, they ſeveral times repeated, with an air of reſpect blended with fear, the word *maté*, before our interpreter could explain to us, that, by this term, which means a dead perſon, they meant to ſignify the ancient poſſeſſor of the garden, who lay buried under the little ſhed, which we ſaw. The natives are perſuaded, that the ſoul of the deceaſed poſſeſſors wander in the neighbourhood of ſuch places, in order to preſerve their products for the preſent proprietors. They believe, that any other perſon who ſhould take any part of ſuch products would die within the year; and ſo generally is this belief diffuſed, that ſeldom does any inhabitant allow himſelf to touch the property of another; ſo that this *maté* is a bugbear, which almoſt always inſures the harveſt to its legitimate poſſeſſor.

The General went on board to review the ſhip's company, and he procured advances for them all.

25th. My collection was already ſo numerous, and called for ſo much care, that I ſpent almoſt the whole of the 24th in preparing them; but the next day Citizen Riche and I aſcended the river called *Baton Ganton*, which empties itſelf into the road on the weſt ſide of the town. It is confined in a very deep channel, excavated by its current between the hills, which in many places are of difficult acceſs. We propoſed to aſcend as far as we could, endeavouring to follow exactly the windings of the banks; but their ſteepneſs obliged us to take to the channel itſelf, where the water was ſeldom leſs than eighteen inches in depth.

We had advanced but a few ſteps, when we met a Dutch ſailor, who had made his eſcape from a large ſhip loaded with cloves, and which was on the point of ſailing for Batavia. The dread of periſhing by the contagious malady ſo fatal to Europeans, who remain there even for a very ſhort time, had made this unhappy man reſolve to conceal himſelf in the woods till the ſhip ſhould have ſailed. We lamented his unfortunate ſituation; but little did we foreſee that the place which he dreaded ſo much, was to terminate our own peregrinations.

On the banks of this river, there grew in abundance, a new ſpecies of *begonia*, remarkable for the ſmallneſs of all its parts.

A beautiful granite, of a fine grain, formed the baſe of thoſe hills. Quartz, generally very white, was there in ſome caſes tinged by the green ſteatite, and in others by iron, which gave it the colour of ruſt. Mica was there diſſeminated in a very uniform manner, and we found ſchorl of a black colour, in minute ſlender fragments.

While we were employed in collecting objects of natural hiſtory, our guides took the opportunity of providing themſelves with a repaſt of a ſpecies of crab *(cancer carinus)*, with which this little river abounds. Their manner of catching them gave us a good opinion of their ingenuity.

This crab commonly ſeeks its food in the cleareſt water, which it ſlowly traverſes, but the inſtant it is approached, it moves off with extreme rapidity. The iſlanders, however, managed to catch a great number of them by the eyes. Having tied to the end of a wand a horſe hair with a nooſe, they render themſelves maſters of the animal by paſſing this nooſe over the baſis of the ſpherical part of the eye. When they miſs their aim, the crab ſeldom fails to return, and in the end is almoſt always taken.

Having early conſumed all our proviſions, we hoped to find ſome natives towards the latter part of the day, who would ſell us ſome. It was about three in the afternoon, when we advanced confidently towards a ſmall houſe, near the bank of the river. But what was our aſtoniſhment, when, to every thing we aſked for, we received no other anſwer than *tarda?* for thus the miſtreſs of this little habitation ſignified, that ſhe could not furniſh us with any of the articles which we deſired. Yet we took great pains to aſſure her, that we would pay her exactly for every thing ſhe gave us. We were the more ſurpriſed at this pretended poverty, as the appearance of the natives announced abundance. In the ſequel I learned, that thoſe peaceable people have not always reaſon to be ſatisfied with the conduct of the Europeans, who govern their iſland. They thought their ſafeſt way was, not to truſt to our promiſes. A few glaſſes of arrack, however, and ſome trifling matters which we diſtributed among them, at laſt gained us their confidence.

They invited us to ſit down under a ſhed formed by an elongation of the roof of the cabin. Crabs caught in the little river were ſet before us in abundance. They roaſted for us potatoes and yams, and regaled us with the wine of the ſago-palm, ſlightly fermented This liquor, which, when newly drawn from the tree, is called *Jagour mouda*, and *aer jaguero mouda*, is much more agreeable than the milk of the cocoa-nut. The girl who was preparing our repaſt, to a figure and appearance extremely pleaſing, joined an air of ſincerity which gave charms to the intereſt which ſhe inſpired. Having brought us ſome fruits, ſhe immediately went and ſeated herſelf behind her mother, from whence ſhe occaſionally ſtole a glance at us, to ſatisfy her curioſity.

This frugal repaſt was not without its charms. To our reflections on the life of a man who undertakes long voyages, were added the pleaſing idea which we had formed of the happineſs of thoſe iſlanders, whoſe wants nature has ſupplied with ſo liberal a hand.

The conſtruction of their houſes is adapted to the beauty of the climate; and the lightneſs of their materials renders it unneceſſary to dig their foundations down to the rock.

As the inhabitants never experience ſevere weather, the walls are conſtructed in ſuch a manner as to allow a free paſſage to the air. They conſiſt of a ſort of paling, frequently formed of twigs of bamboo, placed very near each other.

The cottage of our hoſt, which occupied a ſpace thirteen feet in length, and about ten in breadth, inſtead of bamboos, was wattled with the ſtems of the ſago-tree limbs *(feuilles)*, which, though near together, left ſome intervals, through which the external air had free acceſs into the habitation.

Thoſe ſtems, though very light, have a great deal of ſolidity, being covered with a very hard bark. The heart of them conſiſts of a fungous ſubſtance, which the inhabitants uſe inſtead of corks.

Every part of this habitation was derived from the ſago-tree, even to the roof, the top of which being about ten feet in height, was covered with the leaves *(folioles)* of that valuable tree. They were plaited and fixed to a pole, thus forming rectangles often the whole length of the houſe, and about eight inches in breadth, and as they overlapped each other, they were impenetrable by the hardeſt rain.

The two ſides of the roof were inclined about forty-five degrees, and a part of it formed at the door a little ſhed, where the family enjoyed the freſh air, and where alſo they dreſſed their victuals; for, as the cottage was not furniſhed with a chimney, a fire would have rendered it uninhabitable.

It appeared ſtrange that thoſe people, who loved to be at their eaſe, ſhould ſleep on a ſort of trellis formed of ſticks, two inches aſunder. This was but a hard bed, notwithſtanding the mats with which it was covered; but it afforded them the pleaſure of the freſh air, which circulated freely in the interſtices. It was elevated about eighteen inches above the ground, and below it was depoſited a part of the houſehold utenſils, conſiſting of three earthen pots of their own manufacture, ſome ſquare bottles, which they had bought from the Europeans, and ſpoons which they had formed of the large ſhells common at Amboyna. Among thoſe ſhells we recognized different ſpecies of the *nautilus*, many pearl-oyſters, and alſo a kind known by the name of *pinna rudis*.

We obſerved beſides, under the bed, a pick-axe and a large knife, in the form of a butcher's chopping-knife, called *piſſau* in the Malayan language. They had both thoſe inſtruments from the Europeans.

As the temperature of the climate renders cloathing unneceſſary, their wardrobe contains nothing but what is ſtrictly requiſite to conceal the parts which decency forbids them to expoſe to view.

A pair of drawers, which does not reach lower than the middle of the thigh, or a bit of blue ſtuff tied round the loins, is the only cloathing of the men who are employed in agriculture.

The dreſs of the women is naturally more expenſive. They wear a kind of ſhift of the ſame ſtuff which deſcends to the middle of the leg, and is faſtened round the loins with a girdle.

Our preſents had excited their gratitude. The girl, having diſappeared for a few minutes, returned

turned to offer us ſome odoriferous flowers; but as ſhe wanted a ſtring to form them into noſegays, we had an opportunity of obſerving the readineſs, with which thoſe natives obtain a fibrous ſubſtance from the baſtard aloe, called *agave vivipara*. The maſter of the houſe ran out and cut a leaf of that plant, and placing it upon his thigh, in order to ſplit it with his large knife, and to free it from the pith, he ſoon produced a parcel of filaments, as long as the leaf, and as ſtrong as thoſe of our beſt hemp.

In our return, we met a ſlave whoſe decrepitude excited our curioſity. But it was to no purpoſe that we aſked him, how old he was; for he could not ſatisfy us in that particular, as he knew nothing about it. It appeared ſtrange to us, that a man ſhould not have counted the number of years which he had paſſed in ſlavery!!

28th. This day I took an airing in the road, in a canoe with a double outrigger. Some ſportſmen, taking the opportunity of this rapid conveyance to the eaſtward of the town, joined our party. We followed the right bank of the road, at a little diſtance from the ſhore. The water was ſo limpid as to diſcloſe to our view, at the depth of three and four fathoms, the bottom compoſed of white coral, on which we could perfectly diſtinguiſh the ſpecies of ray, or thornback, remarkable for its large circular ſpots of azure blue, as well as ſeveral other fiſhes exhibiting the moſt brilliant colours. There was a Papow on board, who had the addreſs to catch ſeveral of them. Standing in the fore part of the canoe, he darted his ſpear, conſiſting of a bamboo pointed with iron, at the fiſh which was his object. The ſpear, from its lightneſs, aſcended nearly in the ſame direction; ſo that though it had gone to a great depth, our Papow ſeldom failed to catch it, notwithſtanding the way we were making.

When we were about 1,500 toiſes from the town, we admired the charming ſituation of the Governor's country houſe, at the foot of a chain of mountains, which terminate in a gentle declivity near the road.

A cottage of the natives, half way up this ſlope, encircled with clove and banana trees, added greatly to the beauty of this rural ſcene.

The depth diminiſhed ſo much that, though our canoe ſcarcely drew more than eight inches of water, we were obliged to keep off ſhore, in order to avoid the rocks.

At the diſtance of more than 5,100 toiſes from the town, after paſſing ſome fiſhing boats, we landed on the right bank near a cottage, the owner of which furniſhed us with as many cocoanuts as we wiſhed. Some ſailors who were with us, finding their liquor too ſweet, mixed with it as much brandy as ſuited their taſte, and we had the ſatisfaction of obſerving, that this potation was by no means diſagreeable to our hoſt.

After this breakfaſt, each of us entered on the buſineſs which had brought him thither; and we agreed to rendezvous at the place where we landed.

For my own part, I reſolved to make an attempt on the mountains to the eaſtward.

I followed a path very much frequented by the natives, leaving it, however, and penetrating into the foreſt at every clear interval, which facilitated my entrance.

In ſeveral places the earth had ruſhed down, and expoſed to view the hard grey ſtone, which formed the baſes of thoſe mountains. I had alſo obſerved the ſame kind of ſtone on the ſhore of the road-ſtead, along which we had juſt been walking.

Among the different ſhrubs which grew on the low lands, I obtained a very fine mixed ſpecies of the genus *conyſa,* remarkable for having three principal nerves on each leaf, as in ſeveral ſpecies of the *melaſtoma.* It had alſo the general appearance of the plants of that genus, to which I ſhould have been inclined to refer it, if I had not ſeen the flower.

The phalanger of Buffon (*didelphis orientalis*, Linn.) inhabited the foot of thoſe mountains. I had a near view of ſeveral of them as they rapidly flew paſt me.

When I had gained about 150 toiſes of perpendicular elevation, I remarked a total change in the nature of the ſoil. Beds of calcareous ſtones, perfectly pure and white, crowned thoſe high grounds, which now preſented a great extent of very level ſurface.

There I ſaw a garden ſurrounded with a paling of bamboo, and very well cultivated, although at a great diſtance from any habitation. There appeared to be no poſſible means of watering it; yet the vegetation was very vigorous, owing to the humidity of the atmoſphere in this elevated ſituation. Large fields were allotted to the culture of the ſpecies of pimento, called *capſicum groſſum*, of which the inhabitants of the iſland conſume a great quantity.

A little ſhed on the weſt ſide of the garden afforded us its ſhelter, and in it my thirſty guides found a ſupply of good water in long bamboos, which appeared to be deſigned for ſome other purpoſe. This water had been brought from the foot of the mountain, and we made as free with it as if it had been our own.

Although it was very hot, they thought proper to kindle a fire. I was far from foreſeeing the intention of thoſe people, who, like the greateſt ſavages, took pleaſure in ſeeing the flames devour the dry plants in the clear ſpots. Preſently one of my guides had the imprudence to ſet fire to a large buſh. The air was then very calm; but a light breeze ſoon after ſpringing up, drove the flames towards the garden, and I had the mortification to ſee a part of its paling conſumed, without being able to ſtop the progreſs of the conflagration.

The manner in which thoſe natives produce fire, well deſerves to be deſcribed. Their method is not ſo expeditious as a good flint and ſteel; but they have the advantage of finding their material almoſt every where, a piece of bamboo being ſufficient.

The following is the way in which they perform it. They ſplit into two equal parts, a bit of bamboo eighteen inches in length. In one of the parts they form a longitudinal ſlit, and cut the other tapering to about an inch and a half in breadth. They put ſcrapings of the ſame wood under the ſlit, and in the concavity of the largeſt piece, which they place horizontally, with the convex ſide uppermoſt; then introducing the other piece into the middle of the ſlit, where there is a notch to receive it, and ſupporting it ſtrongly, they give it the motion of a ſaw, and in leſs than a minute the ſcrapings catch fire.

The *canarium commune* overtopped all the trees in thoſe elevated foreſts. I was ſurprized to ſee the calcareous rock naked in the midſt of thoſe extenſive woods, the rotten remains of the trees not having yet covered them with a ſtratum of vegetative mould; and the rents contained nothing but ſtones, which time had broken aſunder. Thoſe ſtones reſembled vaſt plates, of the ſame nature with thoſe which I had many times obſerved in our Alps. Their numerous cavities ſeemed to indicate, that the moſt ſoluble parts of them had been waſhed away by the rain.

Having been driven from this ſpot by the ſmoke of the ſpreading conflagration, I proceeded towards the ſouth-weſt, where I found, in the midſt of the woods, many individuals of the *nam nam* of the Malays (*cynometra cauliflora*, Linn.), which they raiſe in their gardens, on account of its fruit, the taſte of which approaches to that of a good apple, ſlightly acid.

Having followed the banks of a rivulet, which diſcharged its waters near the place where we landed, curioſity induced me to viſit a cottage ſituated near the ſea. There I found an old man, who, contrary to the cuſtom of thoſe iſlanders, wore a long beard. He was boiling, in a large earthen veſſel, ſome ſhell fiſh, which he had collected at low water, among the mangrove trees near his habitation. The reſpectable old man, without being ſurprized at my viſit, immediately invited me to partake of his repaſt. A long ſplinter of a ſago-tree limb was put into my hand, and I imitated my hoſt in uſing it to dig out of the ſhell the fiſh, which were ſet before me on a banana-leaf.

The old man's wife ſoon after joined us, and I ſhould have been extremely ſurprized at the prodigious inequality of their ages, if I had not learned that thoſe iſlanders place their happineſs in marrying very young girls. Their phyſiognomy becomes ſingularly animated whenever they ſpeak of a young woman (in Malay, *paranpouang mouda*), and, on the other hand, it is truly diverting to obſerve the frightful grimace which diſcompoſes their whole countenance, when they ſpeak of an old woman, (*paranpouang toua*).

I endeavoured to make the old man ſenſible of the extreme inſalubrity of his ſituation ſo near to mangrove-trees; where the ſtagnant waters might affect him with violent diſorders. But I could not prevail on him to conſent to remove his cottage to a more elevated ſpot. All the anſwer which he made was, That the ſea afforded him his livelihood.

The palm-tree, named *nipa,* grew in thoſe ſalt marſhes. Its leaves are of great uſe in covering the cottages.

The hunters had already arrived at the place of rendezvous. We were all extremely thirſty ; and we expected to procure cocoa-nuts, with as much facility as when we came to the ſame place in the morning. But the owner of the garden was abſent, and there was no one in the cottage but his wife. It was in vain that we endeavoured to prevail upon her to ſell us ſome cocoa-nuts, for which we would have made one of our guides climb the trees. She gave us to underſtand that ſhe had not liberty to ſell them to us. Beſides, not one of our guides would have dared to climb the trees in the abſence of the owner, and, if he had not come home, we ſhould have had no cocoa-nuts ; for he had placed among the trees a *maté,* for which our guides ſhowed as much reſpect as for the one I have already mentioned. This one was alſo in the form of a little ſhed, the roof of which might be about twenty-ſix inches in height, covered with the leaves of the nipa palm, and ſupported by four poſts, about eighteen inches diſtant from each other.

From the middle of the roof was ſuſpended by a rope a piece of bamboo, about eight inches in length, and covered with half a cocoa-nut. In this bamboo were contained, as I was told, ſome things which had been the property of the perſon who was buried under the little ſhed. I complied with their requeſt not to touch them; for I did not wiſh to treat their uſages with diſreſpect.

When it was near ſun-ſet, we went on board, in order to return to the town. Our Papow gave us freſh proofs of his dexterity, by transfixing, while we were making conſiderable way, different kinds of fiſh.

It was dark when we arrived at the town.

I was employed for moſt of the 29th, in preparing and deſcribing the objects which I had collected on the preceding day.

One of the fruits of my excurſion was the beautiful lizard, called *lacerta Amboinenſis*. I obſerved that it changed its colour like the chameleon: it was moſt commonly green, but it frequently aſſumed a deep brown. This animal is eaſily taken; for it allows one to approach it near enough to catch it by the extremity of the tail, which is of an extraordinary length.

In the evening I repaired to the beach, in order to examine the marine productions thrown on ſhore by the waters, and there I remained till night. I ſaw many fiſhermen in their canoes near the beach, and who, taking advantage of the darkneſs, decoyed the fiſh by torches held near the ſurface of the water. Pieces of wood, ſupported by the levers of the double outrigger of the canoe produced a very clear flame. One of the fiſhermen attended thoſe torches, and carefully diffuſed their light, which it was eaſy for him to do, by only letting bits of the flaming wood fall into the water; while others were employed in encircling with their nets, the fiſhes collected from afar by this brilliant light: we did not heſitate to conclude, from what we obſerved, that thoſe iſlanders were very ſkilful fiſhermen.

Very early in the morning of the 30th, we ſet out to ſurvey the other ſhore of the road. It was neceſſary for us to go about 3,000 toiſes by water, and this tranſit was dangerous in a canoe, whoſe outriggers were not ſufficiently ſtrong to preſerve the equilibrium of the veſſel, when loaded with ſo great a weight. We were anxious to viſit thoſe places which we had not yet viewed; and we went on board without knowing all the danger of our enterprize. But preſently we ſaw one of the outriggers dip under the water, when one of us leaned a little, and without the greateſt care we ſhould have been overſet. If this accident had happened, towards the middle of the road, it would have been difficult, on account of the rapidity of the current, even for the moſt expert ſwimmer of our number, to have reached the ſhore. The danger diminiſhed as we approached the place where we wiſhed to land. But we were much aſtoniſhed at the imprudence of one of the people belonging to the Eſperance, who, although he could not ſwim, and was certain of being drowned, if we had been overſet, ſeveral times deranged the equilibrium of our little veſſel. At laſt, however, we got on ſhore.

The coaſt was there covered with the ſhrub called *ſcævola lobelia.* It delights in ſuch a ſituation; and I alſo found it in New Ireland.

At high water, the ſea waſhed the root of the beautiful tree whoſe denomination, *heritiera,* recalled the name of one of our moſt able botaniſts, Citizen l'Heritier.

In proceeding weſtward I found, among the ſhells upon the beach, ſome lavas very porous, but yet too heavy to ſwim in water. As I had not obſerved, in the inland parts of the iſland, any ſtones which had been ſubjected to the action of fire, it ſeems reaſonable to ſuppoſe, that theſe had been brought into their preſent ſituation, by the waters, agitated by ſome volcanic eruption; for earthquakes are frequent in theſe parts, and the inhabitants ſtill mention with dread, one, among others, which, twelve years before our arrival in their iſland, had been attended with great devaſtation: the houſes could not be inhabited for ſeveral days, and ſome of them were even overthrown.

In the iſland of Banda, a little to the eaſtward of Amboyna, there is an open volcano.

At Karuku a little iſland, alſo to the eaſtward of Amboyna, and at the diſtance of about 5,100 toiſes from it, are hot ſprings which, according to the accounts of ſeveral Europeans, will completely coagulate an egg in five minutes. The hot vapour which iſſues from thoſe waters does not injure the trees which are continually bathed in it; but on the contrary they exhibit proofs of a vigorous vegetation.

This little iſland of Karuku is principally allotted to the culture of the clove-tree.

I found, in the gardens of the natives ſome nutmeg-trees, the largeſt of which did not exceed twenty-two feet in height, the trunk having been about three inches in diameter. They already bore a great quantity of fruit. The nutmeg-tree delights in the ſhade of large trees; and theſe enjoyed the ſhelter of the *canarium commune*. The ſame tree affords them its ſhade, in the iſland of Banda, which is chiefly applied to their culture by the Dutch.

The Council of the Dutch Eaſt India Company, which is eſtabliſhed at Batavia, finding the produce of the nutmeg plantations at Banda ſufficient for exportation, and wiſhing, beſides, to prevent all contraband trade in that precious commodity, ordered, ſome years before we arrived in Amboyna, all the nutmeg-trees in that iſland to be deſtroyed. This order was executed, and very few of the devoted trees eſcaped deſtruction; but a hurricane which happened the ſame year, deranged all their avaricious calculations. It compleated in Banda, the devaſtation which the Council had executed at Amboyna.

The ſame Council afterwards iſſued orders to endeavour to repair the havock which they had committed at Amboyna. They now wiſhed to re-eſtabliſh the culture of the nutmeg there. Hence thoſe which we ſaw near the road, are ſtill very young. Yet we obſerved ſeveral in the gardens of the town, and even oppoſite to the houſe of the Commander of the place, which were much larger, having eſcaped the deſtructive orders iſſued by the government at Batavia.

We found the beautiful laurel, called *laurus culilaban,* which yields, by diſtillation, an aromatic oil very much in requeſt. The natives know how to extract this precious oil, and make it an article of commerce.

The largeſt clove trees which we ſaw in this excurſion, were not above twenty-two feet in

height;

height; and their trunks not above eight inches in thickneſs. The natives are obliged to deliver their produce to the Dutch Company, for about the hundred and fiftieth part of the price for which it is ſold in Europe. We ſaw great quantities of the cloves which the natives had ſpread on mats, under their ſheds, in order to be properly dried before being delivered to the agents of the Company. Thoſe people took ſpecial care not to expoſe them to the rays of the ſun, which would have diſſipated part of the eſſential oil of that excellent aromatic.

Being upon the beach, I heard the ſound of wind inſtruments, the harmony of which was ſometimes very juſt, and blended with diſſonances by no means diſpleaſing. Thoſe fine and harmonious ſounds ſeemed to come from ſuch a diſtance, as to make me believe, for ſome time, that the natives were entertaining themſelves with their muſic, on the other ſide of the road, and near 5,000 toiſes from the place where I ſtood. My ear was much deceived as to the diſtance; for I was not fifty toiſes from the inſtrument. It was a bamboo, at leaſt ſixty feet in height, fixed in a vertical poſition, cloſe to the ſea. Between every joint was a hole near an inch and 2-10ths long, and ſomewhat above half an inch broad. Theſe holes formed ſo many mouths, which, by the action of the wind emitted agreeable and varied ſounds. As the joints of this long bamboo were very numerous, care had been taken to pierce it in different directions; ſo that from whatever point the wind blew, it always met with ſome holes. The ſound of this inſtrument more nearly reſembles that of the harmonica, than any other to which I can compare it.

The experience which we had had of our canoe, in traverſing the road, had given us the hint to prepare it better for our return. Accordingly the outriggers were ſtrengthened, and we proceeded towards the town, without any apprehenſions of being drowned.

OCTOBER 2d. Some hours of this day were employed in viſiting the Governor's cabinet of natural hiſtory, in which I admired a numerous collection of fine papilios, in perfect preſervation. I obſerved many duplicates of very rare ones, and a large box entirely filled with the beautiful ſpecies called *papilio agamemnon*. This cabinet alſo contained a great variety of ſhells, among which were above twenty ſcalata *(turbo ſcalaris,* Linn.)

The Secretary of the Council alſo poſſeſſed great collections of this kind. A taſte for procuring objects of natural hiſtory is very much diffuſed among the Dutch, who find it a powerful mean of obtaining them preferment, when they know how to addreſs their acquiſitions, properly, to perſons poſſeſſing influence with the Council at Batavia, or in Europe.

Captain Huon obtained many rare ſhells from the Secretary of the Council, who gave him, among others, one of the moſt precious and ſcarce ſhells, the glazed or glaſſy nautilus, *(la nautile vitrée)* which he has made over by will to the muſeum of natural hiſtory in Paris.

3d. The next day we proceeded towards the entrance of the road, following the ſhore in the canoe which we commonly made uſe of.

At the ſame time, the tide riſing with great force, produced a rapid current, particularly towards the middle of the road. Notwithſtanding the ſkill of our paddlers, we would have gained nothing by ſtruggling againſt ſuch an obſtacle. As its force was much diminiſhed towards the ſhore, we kept as near it as we could, a manœuvre which was much facilitated by the ſhallowneſs of our veſſel.

I was at ſome pains in obſerving the great diminution of the current towards the ſhore; but I did not expect to find it ſo conſiderable. The principal cauſe appeared to me to be the proximity of the land, which detained the water by a kind of adheſion; whereas, at a greater diſtance, the ſea being much deeper, its upper ſtrata, which form the current, glide with facility upon the lower, and thus the friction is extremely diminiſhed.

While there is a very rapid current towards the middle of the road, there is frequently none cloſe to the ſhore; and ſometimes one in a contrary direction, which ought to be aſcribed to the different points of land, protruding into the ſea.

In a deep part, bordered by a ſandy bottom, we obſerved ſome fiſhing places, formed by a paling of bamboos ſo cloſe together, that the fiſh could not eſcape through it. The entrance was dry at low water; ſo that the fiſhes which were thus encircled at high water could not get out when the tide had a little ſubſided. Beſides, the fiſhes, which commonly prefer the deepeſt water, advanced towards the farther part of the incloſure, where the depth, even at low water, was ſtill about three feet. This reſervoir impriſoned thoſe fiſhes which were moſt eaſily decoyed, and man was not the only fiſher who frequented it; for we obſerved there ſeveral ſpecies of herons. Our preſence drove ſome of them away, but others ſtill remained, with their long legs deeply immerſed in the water, patiently waiting till the fiſhes came within their reach. The fiſhing martens are alſo frequent attendants at thoſe incloſures;

ſures; ſome of them were perched upon the bamboos, from whence we ſaw them dart, from time to time, upon the fiſhes, which afforded them an abundant ſupply of food.

We then haſtened to a point of land ſufficiently advanced into the ſea, to induce the Dutch to build a redoubt upon it. But they had abandoned this fortification, as well as another which we obſerved on the oppoſite ſhore nearer to the entrance of the road. We went on board at a ſmall diſtance from the former redoubt, and ſteered for the country-houſe of M. Hoffman, chief ſurgeon of the hoſpital, with whom we had formed an acquaintance.

After making a haſty breakfaſt, at which ſpices were ſerved up with a profuſion, which made us remember we were in the Moluccas, I went to view the vicinity of this habitation, where a marſhy ſituation afforded me, among a great number of other plants, the beautiful ſpecies of acanthus, with leaves like thoſe of holly (*acanthus ilicifolius*, Linn.), and alſo its variety, with whole leaves.

We then returned towards the redoubt, the form of which, on the ſide next the ſea, is ſemicircular, being not more than eighty-one toiſes in length and fifty-one in breadth. The walls are above ſix feet in height, above three in thickneſs on the land ſide, and ſix towards the road, with embraſures to receive forty pieces of cannon.

While I was on ſhore, Citizen Riche ſet our canoe-men a diving, and they frequently brought him up very valuable marine productions. The road of Amboyna abounds with beautiful ſhells, which are ſeldom met with elſewhere; the moſt delicate being protected, in its numerous deep receſſes, from the motion of the waters, are often found in perfect preſervation.

Our Papow proved to be not only the beſt diver, but the merrieſt of all our guides. His humour, which was truly laughable, very much diverted his comrades. He acted ſeveral ſcenes of comedy, which he told us was a favourite amuſement among his countrymen. One of thoſe which he repeated the ofteneſt, becauſe it produced general applauſe, repreſented a woman ready to lye in. He entertained us, when we were taking ſome refreſhment, with the fineſt part of the piece, and he ſeemed to do great juſtice to the character.

Some of the inhabitants of the South Sea Iſlands act ſimilar comedies. Captain Cook, in his ſecond voyage, relates, that at the Society Iſlands, he was preſent at ſuch an exhibition.

I took the opportunity, while our Papow was in ſo good a humour, to aſk him, What method the people of his country took to ſeparate the umbilical cord? He told me, that they burnt it, above an inch from the body, a mode of operation which has been practiſed by ſome ſurgeons, and that, for this purpoſe, the Papows employed a well kindled torch.

We re-embarked, in order to proceed farther, always following the ſame bank. Some of the *erythrina corallodendron* made themſelves remarkable by their fine bright red flowers.

On the ſteep ſides of the hard grey rocks, which formed the neighbouring ſhore, grew ſome trees of the vacoua *(pandanus odoratiſſima)*, which overhanging the ſea, gave thoſe places a very pictureſque appearance. The large ſpherical fruit, depending from the extremities of their branches, increaſed their natural inclination towards the water, the ſurface of which was always covered with ripe fruit.

Theſe delightful ſcenes gave us reaſon to be pleaſed with our excurſion. Having paſſed ſome time there, we re-embarked, in order to advance ſtill nearer to the entrance of the road.

A charming ſituation, in the vicinity of a cottage occupied by a native, induced us to go on ſhore. The maſter of the cottage was abſent; but we found in this peaceful habitation, a young woman, encircled by her children, whom ſhe was amuſing, with a very ſimple ſtringed inſtrument, which ſhe accompanied with her agreeable voice. It was formed of a joint of bamboo, about ſix inches in length, covered at one end with a piece of parchment, like a drum. Three ſtrings of bark, each of them ſtretched by a bridge, were fixed to the two extremities of this cylinder, which was placed upon the knees. The two moſt diſtant chords ſounded an octave, and the intermediate one a fifth with the fartheſt chord. A circle at each extremity, about 4-10ths of an inch in height, ſupported other ſtrings, intended to render the inſtrument more ſonorous. Theſe ſtrings were more or leſs ſtretched, by a ſlider, which connected two and two together, and which could be moved at pleaſure, through almoſt whole length, as in our drums. A little ſlip of bamboo bark, put the chords ſupported by the bridges into vibration. The accompaniment, although monotonous, ſeemed infinitely pleaſing to our guides, whoſe ears were accuſtomed to this ſpecies of muſic.

This habitation was encircled with nutmeg-trees, not far advanced in growth, but already well proportioned; although at Amboyna, their culture is not generally reliſhed. The vicinity formed a beautiful orchard, in which the brilliant flowers of the *eugenia malaccenſis* attracted our admiration;

miration; and there we alſo partook of the agreeably acid fruit of the *averrhoa carambola.*

The ſhore was embelliſhed, almoſt to the edge of the water, by a large plantation of the ſpecies of tree called *aeſchinomene grandiflora,* which bears the largeſt flower of all the leguminous plants, and which is commonly of a beautiful white, but alſo ſometimes red. The natives frequently eat it boiled, and in ſome caſes they uſe it raw, by way of a ſallad.

The bark of this tree yields a bitter extract, which they adminiſter as a tonic in fevers.

The day was drawing to a cloſe, and the current ſet againſt us. We were therefore obliged to keep cloſe in ſhore, and it was night before we got back to the town.

4th. As ſoon as I had diſpoſed, in the moſt convenient manner, the produce of my laſt excurſions, I went towards the ſouth-eaſt, to a little diſtance from the town, and I ſtill found plants to add to my collections. At my return, I ſaw a white negro, of Papow origin. His hair was white, and his ſkin fair, and marked in ſome places with red, like thoſe of the red-haired Europeans; but his ſight was not weak, as it commonly is in other Albinoes.

This young Papow, was a ſlave to a Dutchman, and had been but a ſhort time at Amboyna.

Where

When I firſt caſt my eyes on him, he was playing on an inſtrument, which I was ſurprized to ſee among thoſe people: it was a jew's harp, cut out of the hardeſt part of a bamboo, but was not quite ſo large as the iron ones which we uſe. As the tongue of it could not be bent, to make it vibrate with the fingers, a little ſtring tied to one of the extremities of the inſtrument communicated the impulſe neceſſary to agitate the tongue, which then gave the ſame ſound as the iron blades of our jew's harps. I was told that this inſtrument was very agreeable to the Papows.

5th. We had, for ſome days, formed the deſign of viſiting the country houſe belonging to the Commander of the place, ſituated near the fartheſt end of the road; and his ſon favoured us with his company.

We ſet off before day-break; and it was ſcarcely five o'clock, before we were ſeated in our canoes.

We ſoon arrived under a ſhed, ſurrounded with trees, which afforded a ſalutary protection from the ſcorching heat; and they were by no means a vain decoration to this delightful retreat, for moſt of them bore excellent fruit. Among the different anonas which were offered to us, the beſt was of the ſpecies known by the name of *anona muricata.*

In a little time, we re-embarked, and we were near 5,000 toiſes from the town, when we paſſed a point of land, beyond which the road extends itſelf greatly towards the north.

A freſh breeze from the ſouth-eaſt impeded our progreſs, and drove the waves againſt our ſlight veſſel, which proved very inconvenient.

At the ſame time, a large boat, loaded with water for the Eſperance, came out of the creek, into which runs a river which affords that article to the ſhipping. They bring the water from that great diſtance, becauſe it is much more eaſily obtained there than near the town, where, however, the water is alſo very good.

The current occaſioned by the return of the tide oppoſed our courſe; but our boatmen redoubled their efforts, and we at laſt reached the end of that long branch of the road.

We walked for ſome time under the ſhade of nutmeg trees, which, as well as the young plants, were much more numerous there, than in any other part of the country which we had hitherto viſited.

The Commander's ſon was here in the midſt of his relations. We were near the houſe of one of his couſins, who was a native of the iſland; and there we behoved to dine after their manner. Fiſh, bread, ſago, rice, and ſome fruits, formed our repaſt. As we were not ſerved with ſpoons, we were obliged to imitate our hoſt by taking up the victuals with our fingers; but we did not eat the leſs on that account, nor with a worſe appetite.

All of us reconciled ourſelves very well to bread made of ſago; the fiſh was ſtrongly ſeaſoned with pimento, but ſome glaſſes of the water of the ſago-tree diminiſhed the violence of its effects.

While we ſat at dinner, we were entertained with muſic. A kind of ſpinet was accompanied by a man's voice; a drum ſerved as a baſe, and a tamtam as a counter-baſe.

After dinner our hoſt carried us in his canoe about 500 toiſes towards the eaſt.

There we ſaw a man employed in preparing a ſago-tree. This tree, which was about eighteen inches in thickneſs, had been cut down a little time before. It was already opened for a part of its length, the whole of which did not exceed forty feet, and it had afforded a great deal of ſago. This palm, like the other trees of this genus, preſerving nearly the ſame diameter for its whole length, yields nearly as much ſago towards the top of the trunk as towards the root. (Fig. A. Plate xlii, is an exact figure of a young ſago tree.) The external part of its trunk is formed of a very hard ligneous ſhell or cruſt, four lines and a half in thickneſs. The trunk is a large cylinder filled with pith, which is interſperſed, through the whole length of the trunk, with ligneous fibres, about the thirteen-thouſandth part of an inch in thickneſs, and often above two lines diſtant from each other.

They pound the ſago after taking it out of the tree; they then put it into bags made of a ſort of canvas, furniſhed by the baſes of the limbs of the cocoa-nut tree. On thoſe bags they throw, from time to time, pure water, which carries off the *fæculæ* (or ſediment), while this kind of ſearce, or ſtrainer, partly retains the woody fibres.

The water repleniſhed with the fæculæ is received into troughs, about three feet in length, formed of the lower part of the limbs of the ſago tree. On the end of each trough they faſten a ſtrainer, to retain that part of the fæculæ which has ſubſided, and the ligneous fibres which have eſcaped the firſt waſhing, ſwim on the water.

This laſt ſtrainer required no preparation: it was of the ſame nature with the other; both being a fibrous contexture, which differs from our ſtuffs in this, that its component fibres are ſimply applied, and run parallel to each other throughout the whole length; but ſome ſhort lateral fibres, which traverſe the longitudinal ones, bind them together, and form a firm contexture of the whole.*

To clear the fæculæ of the ſago of the ligneous fibres which ſtill remain, after having been waſhed in the ſacks or bags, it is again put into troughs, commonly four in number, and arranged; one higher than the other; ſo that what is not depoſited in the firſt, may be received into the ſecond, and ſo on.

The texture of the ſago tree well deſerves examination, and therefore I diſſected the trunk of one, in which I obſerved the conformation of parts common to many other ſpecies of palms, as Citizen Desfontaines has ſo well deſcribed, in a memoir on plants with ſeminal leaves.

6th and 7th. I could not go any great diſtance from the town on the two following days, on account of the aſſiduous care neceſſary to preſerve my collections. An intelligent aſſiſtant to each naturaliſt, would have ſaved that precious time,

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* The reader will obſerve, that the kind of ſcarce here deſcribed, is merely a natural production, which is not over plainly intimated by the Author. They are commonly called by the Engliſh cocoa-nut ſtrainers. They reſemble fragments of very coarſe brown linen, but are not ſo pliable. If I rightly remember, they are from two to three feet in length, and where broadeſt, which is about the middle, from a foot to about fifteen inches in breadth.—*Tranſlator.*

which

which ſhould have been employed to a much better purpoſe.

8th. But this day, light had ſcarcely appeared, when we were upon the road. In croſſing it we directed our courſe towards its entrance, and very nearly approached a redoubt, about 5,000 toiſes diſtant from the town. In that place, the road was at leaſt 3,500 toiſes in breadth; ſo that an enemy had nothing more to fear from this battery, than from the firſt which I have deſcribed. This is conſtructed exactly in the ſame manner; but it is ſituated nearer to the entrance of the road.

Near this ſpot was a hamlet, compoſed of ſome cottages, the neatneſs of which indicated the eaſy circumſtances of the inhabitants. The ſea ſupplied them copiouſly with food, and moſt of the houſes were encircled with well cultivated gardens.

Some of thoſe iſlanders raiſed fowls, and diſpoſed of them at the market in the town. We accepted the invitation of one of thoſe honeſt people, who inſiſted on treating us with new laid eggs.

Moſt of the gardens were ſurrounded with ſhrubs, among which we diſtinguiſhed the *jatropha curcas,* which being planted cloſe together, formed a good fence. Its ſeeds have a very agreeable taſte, reſembling that of the hazle-nut. The natives apprized us, that, when eaten even in a ſmall quantity, they induced great drowſineſs. They did not know that the narcotic quality reſides in the part, known to the botaniſts by the name of the embryo ; and I had the pleaſure of ſhowing them, that, when this part is removed, the kernel may be eaten, without any inconvenience.

Advancing farther into the country, we obſerved ſome individuals of the arnotto, *bixa orellana,* which were cultivated with little care. When we had reached the entrance of the road, we ſaw at a diſtance ſeveral large canoes ſtriving to make it, and ſome others which had nearly gained that object.

Our little canoe had arrived at the place of rendezvous, when the boiſterous tide raiſed waves, which did not a little embarraſs the ſteerſman ; the ſea being at the ſame time very much broken. It was, in ſhort, abſolutely neceſſary for us to wait till it was calmed, before we could go on board, in order to proceed to the other ſide of the road, which was the moſt diſtant excurſion we had hitherto made.

For ſome time we kept along the ſhore, in order that we might the more eaſily oppoſe the tide, and compenſate the lee-way, which was occaſioned by the force of the current. Near the extremity of the road, a great number of dolphins *(delphinus delphis)*, darting rapidly through the water, paſſed us at ſo ſmall a diſtance, as to make ſuch of us as could not ſwim, ſeriouſly afraid that we ſhould be overſet.

We immediately landed near a little habitation, ſituated near one of the fineſt parts of the iſland.

The fiſhermen on the other ſide had provided us abundantly with their article, which one of our number had a mind to dreſs, after the faſhion of the inhabitants of the South Sea Iſlands, who uſe the milk of the cocoa-nut as their only ſauce. To this diſh, ſo much praiſed by Captain Cook, he made an addition of pimento. We had the ſatisfaction to obſerve, that this compoſition was extremely agreeable to our hoſts, to whom it was unknown; and they cheerfully furniſhed our guides with every thing neceſſary to ſucceed compleatly in preparing it. He who gave directions for the compoſition of this excellent meſs, acquired among the inhabitants the reputation of being a very good cook; and we were much diverted by their perpetually aſking us, if he was not the chief cook on board of our ſhip.

In the vicinity of this cottage, I admired the beauties of the ſhrub, known by the name of *abroma auguſta*. The *hedyſarum umbellatum* made a diſtinguiſhed figure, amidſt ſeveral new ſpecies of the ſame genus. The nutmeg-trees invited to this ſpot pigeons, of the ſpecies *columba alba*, Linn. The crops of thoſe which we killed were full of nutmegs.

The exceſſive perſpiration, occaſioned by the heat of the climate, often induce cutaneous diſeaſes. The bodies of five of our hoſts were covered with dry tetters, the ſcales of which falling off, were immediately ſucceeded by freſh ones; and appeared the more conſpicuous, on account of the colour being a contraſt to the copper tint of their ſkins. This malady frequently invades every part of the body. We alſo ſaw ſome children, who were affected by another cutaneous diſorder, from which they did not appear to ſuffer any pain: almoſt the whole of their bodies were covered with large warts, not much more than an inch diſtant from each other.

I ſeldom viſited a cottage at Amboyna, in which I did not find inſtruments of muſic; and I met with one here, which I never ſaw any where elſe. It was a ſort of hautboy, the lower extremity of which terminated in two diverging branches pierced with holes in the ſame order in each, and thus forming two flutes, both ſounding the ſame notes. The natives love to play in uniſon, and apply one hand to each branch.

I returned to the town, in a dark night, when the water in the road, preſented to my view collections of little bodies, which illuminated large portions of the ſurface. The water which I took up in the moſt luminous parts, left on the filtre, through which they were paſſed, little molecules which differed in no reſpect from thoſe which I had already examined, before our arrival at the Cape of Good Hope, and in other places, at a great diſtance from land. We made the land near the town, at the moment of high water, and were obliged to wade, more than 150 toiſes, through the water, which was ſo ſhallow as not to admit our canoes to come near enough the ſhore to land us. The fiſhermen were kindling their fires to decoy the fiſh, which the tide had brought thither in ſuch numbers, that we ſaw their nets filled with them.

9th and 10th. The two next days were employed in viewing the vicinity of the town. I was ſurprized to find in ſo ſmall an iſland, ſo many different ſpecies of vegetables; but doubtleſs its proximity to Ceram had enriched it with part of the plants of that extenſive iſland.

In the evening, the Governor gave an entertainment, this having been the anniverſary of one of his ſons, who was in Europe finiſhing his education. All the naturaliſts were invited, and we made our appearance at the Government-houſe, an hour after ſun-ſet. As the coolneſs of the atmoſphere was not then inconſiſtent with dancing, the ball had already begun, and ſeveral country dances were formed in the great ſaloon, in which the Governor received us, on our firſt viſit along with General Dentrecaſteaux.

This ſaloon was a kind of gallery, which was decorated with ſome engravings, and a few very indifferent pictures, placed at a great diſtance from each other. The walls were only plaſtered with ſome coats of lime; although it would not have been difficult to have adorned them with fine wainſcotting at a ſmall expence; as the iſland produces ſeveral kinds of wood proper for inlaid work.*

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* The number of ſcorpions and ſolopendræ (or forty-legs) before obſerved to have been brought on board with the wood taken in at Carteret harbour, might have ſuggeſted to the Author, that wainſcotting only ſerves as an aſylum to thoſe and other vile inſects, which ſwarm in moſt tropical countries. For the ſame reaſon, a great number of prints and pictures are inconvenient, and it is ſcarcely poſſible to preſerve paper from the attacks and the excrements of inſects. Plain painting and white-waſhing are almoſt the only decorations, which the inſides of houſes conveniently admit in thoſe climates; as the Author would have diſcovered, if he had continued to reſide in them.—*Tranſlator.*

Almoſt all the daughters of the Company's ſervants were at the ball. The heat of the clime certainly forbade all violent motion; yet we were ſurprized to ſee the young ladies dance in a manner ſo very unfavourable to the diſplay of their graces. They contented themſelves with walking ſlowly, ſcarcely obſerving the figures, and their ſupine air formed a ſtrong contraſt with the extreme quickneſs, which the compoſer had given to the country dances which they performed.

The orcheſtra conſiſted of four negroes, who played on the violin, and another who performed on the baſs.

The ball was ſucceeded by a ſplendid ſupper, which was ſerved up in the ſame apartment.

From the ſmall number preſent at half an hour paſt nine, I ſuppoſed that the party at ſupper would not be numerous; but the greater part of the gueſts, not caring for the dance, did not come till about ten at night.

Gaiety prevailed at this entertainment, which laſted a good part of the night; and the dancing was reſumed, and continued till ſun-riſe.

We were ſurprized that we had not the company of M. Strampfer, one of the miniſters of the Proteſtant perſuaſion, who had received us ſo kindly; but we ſoon learned that he had lately incurred the diſpleaſure of the Governor, becauſe ſorſooth, forſooth, after having diligently attended to the education of that gentleman's children, for ſeveral years, the poor man had requeſted payment! It might well be ſuppoſed, that the boaſted honour of having educated the children of the Governor, was a compenſation not quite ſufficient for a man who had a family of his own; but he could obtain nothing more!!

11th. I employed a part of this day, in ſurveying the beauties of ſeveral gardens, and among the plants which adorned them, I obſerved the Chineſe box-tree, *murraya exotica,* which formed very fine avenues, alſo the mixed carmanthine, *juſtitia variegata,* and the variegated turnſole, *croton variegatum,* ſo remarkable for the beauty of their flowers and their foliage.

The *lawſonia inermis,* called by the natives, *boungnia laca,* is employed as on the continent of Aſia, to ſtain certain parts of the body, and particularly the extremities of the fingers. The Chineſe make the moſt uſe of this article.

Soon afterwards I came to a cottage, ſurrounded with a great number of cocoa-nuts, ſuſpended from the leaves of the roof, and from the adjoining trees. The owner of this cabin, pointing to his numerous family, told me that he was preparing to make a large plantation of cocoa-nut trees. Moſt of thoſe nuts had germinated,

minated, and he ſaid that the plants muſt be about eighteen inches in height, before they were committed to the earth, aſſuring me that, but for this precaution, many of them would rot, without ſpringing up.

As the moment of our departure from Amboyna approached, I ſent on board the collections, which I had made in that charming iſland, and on the 13th I followed them in perſon.

14th. The expreſs orders, which had been iſſued the evening before, for every one belonging to the expedition to repair on board the frigates, made us ſuppoſe that every thing was ready for our departure, and that nothing but contrary winds could prevent us from ſailing. A part, however, of the water, which had been conſumed while we lay at anchor, ſtill remained to be replaced; and, as this buſineſs was not finiſhed till the afternoon, we could not take our departure till the next day.

The people belonging to the ſhips were very well ſatisfied with this relaxation. They had enjoyed as much leiſure as they could deſire, and ſlaves had even been employed to bring on board our complement of wood and water, in the large ſhallops which they call *yacou*.

Our ſhip had been caulked, and having been ſurveyed,

ſurveyed with ſcrupulous attention, was found to be generally in good condition.

The iſland of Amboyna, called Ambon by the natives, was then the Dutch government in India, which ranked next to the general one of Batavia.

The latitude of the place of the obſervatory, towards the weſtern extremity of the town, was found to be 3° 41′ 40″ S. and its longitude 126° 9′ E.

The variation of the compaſs there, was 1° 13′ 20″ W.

A flat dipping needle gave 3° of inclination.

Although the heat was oppreſſive, the thermometer varied regularly every day, only from 22° to 25°.

The barometer kept conſtantly at 28 inches two lines, its variation not exceeding one line.

At the place where we lay at anchor, the time of high water, at the full and change of the moon, was at half an hour paſt twelve at noon, and the water roſe about eight feet. The tides take place twice a day.

The road of Amboyna forms a channel about 10,200 toiſes in length, and its mean breadth is about 3,400 toiſes. In many places, towards the ſides, there is good anchorage, notwithſtanding that the bottom, in ſome ſituations, is coral.

About the middle, the depth is too great for anchoring.

The fort, which is called Victory Fort, is built with bricks, and the Governor and ſome of the members of the council reſide in it. It was then falling into ruin, and from every gun which was fired, it ſuſtained ſome damage.

The garriſon was compoſed of about two hundred men; the greater part of them natives of the iſland; the reſt were European ſoldiers in the Company's ſervice, and a weak detachment of the regiment of Wirtemberg.

Moſt of the European ſoldiers were tormented with the deſire of reviſiting their native country; but none of them had yet ſeen the happy moment of return. Some who had been amuſed with this vain hope, for many years, were a ſource of dejection to the reſt.

The ſmall number of ſoldiers who ſurvive any long reſidence in India, renders thoſe who have paſſed ſome years there, ſtill more valuable; and hence the Dutch Eaſt India Company ſeldom fulfil their promiſe to allow the men, whoſe time is expired, to return to Europe. Every method is tried, in order to induce them to make a freſh engagement; and they who carefully avoid every ſtipulation, which can tend to prolong their confinement in the iſland, do not the ſooner obtain their liberty. I have met ſome of thoſe unhappy men who had been detained in the iſland more than twenty years; although, in conformity with the terms of their agreement, they ought to have been then free.

The Iſland of Amboyna is divided into ſeveral diſtricts, which in many places, form ſo many villages, called *nygri*. The command of each *nygri* is conferred on a native, who is decorated with the title of *orancaye*. This man, to whom the police of his little canton is entruſted, is himſelf altogether ſubordinate to the Dutch government, to whom all weighty caſes are referred. The Dutch commonly chuſe for orancayes, natives who profeſs the Proteſtant religion, preferring the ancient chiefs, or their neareſt relations, and above all thoſe who are richeſt.

Each of thoſe orancayes has the government of about one hundred natives. The Dutch Company, when they inveſt them with their authority, preſent them with a ſilver-hilted ſword. Thoſe chiefs are cloathed in the European ſtile, all in black, and they wear three-cocked hats, very much pointed and depreſſed. Of this dreſs of ceremony, ſhoes form a part, which they wear when they are obliged to appear in public, or in the preſence of their Dutch ſuperiors.

The title orancaye is compounded of two Malayan words *oran kaya,* the literal tranſlation of which is, a rich man.

The dignity of orancaye, is by no means an empty title: it gives thoſe petty chiefs the means of making their fortune, which they ſeldom fail to do, although very vexatiouſly to thoſe who are ſubjected to them; for when raiſing contributions on the poor Amboynians, on account of the agents of the Company, they take care not to neglect their own intereſts. It nevertheleſs happens ſometimes, that their fortunes decline faſter than they increaſed, when the agents of the Company find the means of turning the avarice of the orancayes to their own advantage.

The inhabitants of Amboyna ſpeak the Malayan language, which is very ſoft. Its analogy with the language ſpoken in the South Sea Iſlands, has induced me to preſent the reader, at the end of the ſecond volume, with a very copious vocabulary, which I collected at Amboyna and in the iſland of Java, where I remained a long time, at the cloſe of this expedition.

The uſe of betel has been eſtabliſhed among thoſe people, time immemorial. They take ſome young leaves of the pepper tree called *piper ſtriboa,* in Malay *ſiri,* and having covered them with a little very fine lime, made of burnt ſhells, and newly ſlaked, they chew them with the arec-nut. Some of them always continue this amuſement, except when they are eating or ſleeping. I was much ſurprized that, notwithſtanding their inceſſant uſe of lime, thoſe people had in general very ſound teeth. They become, however, of a blackiſh colour, which penetrates the enamel without diminiſhing its poliſh. They are in the practice of cleaning them frequently with a powder which is not very far fetched; for it conſiſts merely of a calcareous ſtone of moderate hardneſs, which they pound between two pieces of hard grey ſtone. They alſo uſe a ſmall quantity of this laſt ſtone, to rub the external part of their inciſive teeth.

Thoſe people, not content with chewing the betel, import from Malacca an extract of a bitter plant, known by the name of *gamber*, which they uſe for maſtication.

Mountains of moderate elevation cover Amboyna, and principally the eaſtern part of that iſland.

The coffee which they gather appeared to us inferior to that of the Iſles of France and of the Re-union. Beſides, the Dutch ſettled in the Moluccas, are very careleſs in its preparation. Their domeſtics are in the practice of ſubjecting it to a degree of torrefaction, which almoſt reduces it to a cinder, in order that they may have the leſs trouble in pounding it, with the wooden peſtles and mortars, which are the only machines they uſe for this purpoſe.

The greater part of the marſhy grounds are allotted to the cultivation of the ſago tree, which furniſhes the inhabitants with wholeſome food. It forms an article of their ſea-ſtores for long voyages, as does alſo the Canary almond, which they dry for preſervation. That almond has likewiſe a very agreeable taſte when newly gathered.

The rice conſumed at Amboyna is not the produce of that iſland. Yet it would ſucceed well, on moſt of the low lands, where the water which iſſues from the baſes of the mountains, preſents very convenient ſituations for its culture. But the Dutch Eaſt India Company has prohibited the application of the land to this article; becauſe the purchaſe of it drains from the iſland the ſpecie paid by the Company for cloves. Thus thoſe monopoliſts prevent the accumulation of ready money, and procure, at a very moderate rate, the produce of the labour of the inhabitants. Beſides, as rice is much uſed by perſons in tolerable circumſtances, it is found to be a branch of lucrative commerce to the Company's agents, who import it chiefly from the iſland of Java.

By ſuch means that Government, excluſively conſulting its own intereſts, cramps the induſtry of the natives, by obliging them to abandon, ſo to ſpeak, every ſort of cultivation, except thoſe of cloves and nutmegs.

The Dutch alſo take care to limit the cultivation of ſpices, in order that the quantity produced may not much exceed the ordinary demand. Thoſe meaſures, though deſtructive of all activity, are, however, well ſuited to the ſupine diſpoſition of thoſe people.

Many farinaceous roots, and a variety of trees, afford them abundant ſupplies of food, almoſt without cultivation; as if nature had thus intended to compenſate man, for the inactivity to which ſhe ſeems to have condemned him, in ſo ſultry a climate.

Engrafting would doubtleſs contribute to improve the various fruits produced in this iſland; but no perſon, even among the Europeans, has yet ſucceeded in that experiment; for they have always allowed the joint to dry, before the circulation of the ſap was fairly eſtabliſhed between the ſtock and the ſcion. It would, however, have been eaſy to prevent that accident by keeping the part in a ſuitable ſtate of moiſture, till the junction was fairly formed.

The European kinds of pulſe are but little adapted to the heat of the climate.

A very ſmall banana, called *piſang radja,* is looked upon as the beſt kind. Next to the *litchi* and the mango, it appeared to me the beſt fruit in Amboyna. They have ſeveral ſpecies of the litchi, among which ought to be reckoned the *nephelium lappaceum*, or the *ramb-outan* of the Malays. Thoſe celebrated botaniſts, Linnæus, Juſſieu and Gærtner, were miſtaken in the claſſification of that genus; doubtleſs, becauſe they had not an opportunity of examining its parts of fructification, in a ſtate of perfection.

Linnæus has claſſed it among the euphorbia, Juſſieu among the compoſites, and Gærtner among the amentaceæ; but it evidently belongs to the tribe of ſoap-berry trees (*Sapindus ſaponaria*, Linn.).

The ſame reſtrictive ſyſtem, which we experienced at the Cape of Good Hope, alſo prevails at Amboyna. In order to prevent any augmentation in the price of commodities, the Company undertook to furniſh us with proviſions; and gave the natives a trifling price, for articles which they ſold to us at a very great advance.

The Dutch have transformed a cuſtom ſtill more pernicious into a law, which authorizes the chiefs employed by the Company to take from the natives, without any payment, the proviſions neceſſary for their daily conſumption. Nothing can be imagined more oppreſſive than this arbitrary contribution. The moſt laborious man, like the moſt lazy, is almoſt ſure of being ſtripped of every thing but a ſcanty ſubſiſtence. Hence moſt of the natives content themſelves with the eaſieſt ſpecies of cultivation, paſſing in idleneſs that time which, under a different government, they might have employed in placing themſelves in eaſy circumſtances.

The fiſcal, who ſuperintends the police, compleats the oppreſſion of the inhabitants. That officer has the power of impoſing, *for his own benefit*, pecuniary fines, which he fixes according to the meaſure of his own rapacity, and the circumſtances of the natives, whom he is often pleaſed to find guilty, when they have not committed the ſlighteſt offence!! A Mr. M'Kay, however, then exerciſed that office in a manner very different from that of moſt of his predeceſſors. The inhabitants very much extolled his humanity, which was the more praiſe-worthy, as he had it in his power to do them every poſſible miſchief with impunity. That brave man told us, that he preferred mediocrity of fortune to riches obtained by ſuch means. Mr. M'Kay, when explaining to us one day the prerogatives of his office, informed us that ſome of our ſailors had cauſed a riot, at an unſeaſonable hour of the night, in the houſe of a very rich Chineſe, who ſold arrack and other ſpirituous liquors; adding, with much frankneſs, that the powers with which he was inveſted entitled him to extort a large ſum from the Chineſe, by way of fine, and to convert it to his own uſe. Others, ſaid he, would not have ſcrupled to have availed themſelves of ſuch an opportunity; but I never had occaſion to repent of my moderation.

The clove is the principal article of produce at Amboyna, and ſeveral little iſlands to the eaſtward of it, where it ſucceeds extremely well. The Dutch have placed reſidents there, to prevent the exportation of that precious commodity.

The nature of the ſoil of Banda appeared to me more favourable to the cultivation of nutmegs than that of Amboyna; for it is generally acknowledged that the nutmegs of the latter iſland are inferior to thoſe of the former.

Nutmeg-trees and clove-trees were formerly diffuſed over the iſlands of Ternate, Tidor, Makian, &c. in much greater abundance than in Amboyna and Banda; but the Dutch, determined to appropriate to themſelves the excluſive benefit of thoſe precious trees, obliged the chiefs of the firſt-mentioned iſlands to deſtroy the plantations of them. Their agents, who reſide there, make very rigorous viſitations, in order to ſee this order executed; and thoſe articles are only cultivated at

Amboyna, and the other iſlands immediately dependent on the Company, where they can exerciſe continual vigilance. This inquiſition, impoſed by Dutch avarice, is very much fruſtrated by the birds, which convey to the neighbouring iſlands the ſeeds of the ſpice-trees from thoſe where they are cultivated. This circumſtance made the Company reſolve to ſettle reſidents in thoſe iſlands, whoſe principal buſineſs it is, continually to ſearch for and deſtroy all the young ſpice-trees they can meet with. But it alſo often happens that the ſeeds are dropped in ſituations ſo precipitous, as to eſcape the moſt active vigilance.

The ſlaves introduced into the Moluccas, are chiefly brought from Macaſſar and Ceram. The women of Macaſſar are generally of a middling ſtature, and have agreeable features. Their hair is not criſped; and their complexion, though ſtill more yellow than that of European women labouring under the chloroſis, yet procures them, from the natives of the Moluccas, the name of white women, *paranpouang pouti*.

Before the Dutch eſtabliſhed the ſlave-trade, the iſlanders of Ceram were in the barbarous practice of devouring their priſoners of war. It is melancholy to learn that they have abandoned that atrocious cuſtom, only becauſe they turn their captives to better account by ſelling them.

If this change of ſyſtem has been attended with an apparent good, it muſt alſo give riſe to more frequent wars. Man muſt indeed have ſunk to extreme degradation, when the introduction of ſlavery becomes inſtrumental to his civilization! This, however, may be ſaid of a people who were formerly cannibals.

The Dutch ſettled in the Moluccas, ſpeak the Malayan language to their ſlaves; taking ſpecial care not to teach them their own mother-tongue, leſt the ſlaves ſhould underſtand their converſation among themſelves.

As ſoon as the Dutch had ſecured the excluſive commerce of the Moluccas, they endeavoured to aſcertain the population of thoſe iſlands, and, by exaggeration in that particular, in order to convey a great idea of the ſubjugated country, they ſtated it at 150,000 ſouls, which, according to univerſal opinion, and the moſt recent eſtimates, is double the number of people in the Moluccas.

The quantity of cloves annually produced in that ſettlement is about 2,000 packages, each 534 pounds avoirdupois. The crop of two years forms the cargoes of three ſhips, two of which are ſent in one year, and the third in the year following. The quantity of cloves and nutmegs exported ſometimes exceeds the conſumption; and, in that caſe, it is well known that the Dutch

Eaſt India Company burn the overplus, in order to keep thoſe commodities always at the ſame price.

In ſpite of all their anxiety to monopolize the ſpice trade, it is computed that one-fiftieth part of the crop is annually ſmuggled. As the ſmall ſalaries of the Company's agents do not allow them to make their fortunes rapidly, ſeveral of them have recourſe to means of improving their ſituation, which, though certainly dangerous, are eaſily put in practice. And, notwithſtanding all the vigilance of the Company, their ſervants ſucceed in depriving them of a ſmall part of the ſpices.

It is not long ſince the Governor and Lieutenant-Governor of Banda were depoſed and ſent to Batavia, for having converted to their own uſes part of the produce of that iſland. But thoſe abuſes are come to ſuch a pitch, that this example will only ſerve to make others conduct their operations with more addreſs, in order to prevent a diſcovery.

That contraband trade is more particularly carried on by means of the canoes of Ceram, in the vicinity of which the ſpice iſlands are ſituated; and the ſpices thus procured are bartered, with Engliſh ſhips, for Indian ſilks, opium, fire-arms, gunpowder, lead, hardware and tin, which the inhabitants of Ceram exceedingly value, converting it into bracelets, ear-rings, &c. Some of thoſe articles are again ſold at Amboyna.

The Dutch have two factories at Ceram, one of them at its north-weſt extremity, and the other at Savay. General Bougainville had been miſinformed when he ſaid, that they had been expelled from this laſt poſt. They have loſt, it is true, very extenſive poſſeſſions in other parts of that large iſland; but they ſtill retain their eſtabliſhment at Savay.

The reſident who entertained General Bougainville, during his ſtay at Bourou, had been dead ſeveral years. At Amboyna, we had the pleaſure of ſeeing his widow, who has preſerved an agreeable remembrance of that French gentleman. Such is her taſte for our language, that ſhe has employed all the means in her power, at that diſtance from Europe, to have her children inſtructed in it.

The Chineſe are almoſt the only ſtrangers who are permitted to reſide at Amboyna; but they are obliged to ſubmit to naturalization, and thus can never return to their own country. They are permitted to trade among the Moluccas; but it is only at Macaſſar and Batavia, where veſſels from China are permitted to enter, that they can procure Chineſe commodities. They are all of a commercial turn; and ſome of them have purchaſed, at a very high price, the excluſive privilege of dealing in certain articles; and hence they ſell them at exorbitant rates. They practiſe all ſorts of expedients to get money, and hence their reputation often ſuffers exceedingly; but, on that head, they ſeem to have loſt all ſenſibility. Some Jews, whom the Company permit to reſide in the iſland, enter into commercial competitions with thoſe Chineſe; but the Iſraelites are no matches for them, the Chineſe having greatly the advantage, in point of numbers and connections.

The collector of the Company's revenue is a Chineſe, who is likewiſe charged with preſerving the police among his countrymen eſtabliſhed in the iſland, and takes cognizance of ſuch caſes as are not ſufficiently important to be reſerved for the deciſion of the government of Amboyna. We one day paid him a viſit, in company with one of the miniſters of the Proteſtant perſuaſion, and he entertained us with excellent tea. The table was covered with a great variety of well-preſerved comfits: one of the beſt was the young nut of the fruit of the ſago-palm. That chief, who is called the Chineſe Captain, ſhowed us, with an air of ſatisfaction, his armorial eſcutcheons, variegated with a great number of colours. Thoſe ornaments were profuſely diſplayed in the apartment where he received us, and his bed was hung round with them.

His houſe, like thoſe of his countrymen, was in no reſpect ſimilar to thoſe of the natives. The Chineſe build much more ſolidly. Their houſes are conſtructed like thoſe of the Europeans, with ſome difference in the diſtribution of the apartments. The body of the building is of wood, and the walls of clay, thickly rough-caſt, and afterwards covered with ſeveral coats of lime.

The frequency of earthquakes and hurricanes makes the inhabitants prefer wooden houſes; and ſcarcely any other than the public buildings are of ſtone. It almoſt always happens, that in thoſe moments of conſternation the inhabitants are obliged to quit their habitations, and to betake themſelves to little cabins very ſlightly conſtructed, where they are much more ſafe than in their houſes, which the tempeſts and the earthquakes ſometimes overturn.

We enjoyed excellent weather at Amboyna; the winds were never violent, and thoſe which we had from the ſouth-eaſt and north-weſt, were very weak.

The market for the different fruits of the country is in the Chineſe quarter. The Malays, like the Arabians, call it by the name of *bazar*. The dealers aſſemble there, chiefly in the evening, and remain till nine at night, each of them being lighted with one or two torches, compoſed of the reſin called *dammer*, furniſhed by a ſpecies of *cycas*, of the ſame name: (*dammara alba, Rumph. Amb.* vol. ii. chap. xii, tab. 57.) They incloſe this reſin in ſago tree leaves, without any central wick. It burns with very little ſmoke; but care muſt be taken to remove the covering, as it is reduced into a cinder, and to trim it level with the reſin. Thoſe people are lighted at a very ſmall expence; for a dammer torch, eight inches in length, and about an inch and a quarter in thickneſs, coſts them not one-ſixtieth of a penny ſterling, and yields a very clear light for three hours. Their cottages are lighted with the ſame reſin.

Beſides the fruit, there are ſome other eatables ſold in that Bazar. In a ſultry climate, and an extremely humid atmoſphere, fiſh would ſoon putrefy, if it was not quickly dried; and hence more dried than freſh fiſh is ſold in that market. When the fiſh is prepared with the ſmoke of a ſmall fire, its taſte is preferred by the inhabitants to that of freſh fiſh.

The Molucca iſlands, after having been long under the dominion of the Arabians, the Moors, and the Malays, came at laſt under that of the Europeans. The Portugueſe, the Spaniards, and the Dutch, contended for that dominion, and eſtabliſhed their factories and their forts in thoſe iſlands. The Dutch finally prevailed, and have for many years enjoyed the monopoly of their ſpices. Thoſe different ſovereigns have produced ſuch a change in the manners of the natives of Amboyna, that it is now difficult to diſcover any traces of their original character. The Portegueſe introduced among thoſe people the catholic religion. The Dutch have uſed their utmoſt efforts to render them Proteſtants, thinking that one of the moſt likely means to ſubjugate them. Hence they have a great number of ſchools, where the children of the natives are inſtructed in that religion, and in reading and writing Malayan. Service is performed in that language, in a church appropriated to the uſe of the natives; and in Dutch in another church, attended by the Europeans. There are two miniſters belonging to each.

The Chineſe, as may well be ſuppoſed, have a pagoda in this place.

Some natives, who ſtill adhere to the religion introduced by the Arabs and the Moors, are provided with a moſque. The greateſt number of true believers are ſettled on the other ſide of the road, to the northward of the town. The Dutch have ſucceeded much better in making proſelytes to their religion, in the vicinity of their principal ſettlement. The iron rod, with which they cruſh thoſe miſerable people, has reduced them ſo nearly to the condition of ſlavery, that it will not excite ſurprize, if we obſerve in them ſome of the vices which originate in that ſtate of human degradation.

Although thoſe people be habituated to reſign almoſt every thing they poſſeſs to the Europeans, there is one article which they are not diſpoſed to reſign to them. Jealouſy reigns among them to an extreme, which makes any indiſcreet propoſal to their women very dangerous. In ſuch a caſe no dread of puniſhment would prevent them from executing their vengeance.

The Dutch men preſerve their European clothes as a ſort of ceremonial dreſs; but they have all veſts with ſleeves, in order that they may conveniently throw off their coats, when the maſter of the houſe, to which they happen to be invited, ſets them the example. On ſuch occaſions, thoſe who wear wigs, lay them aſide, and put on large caps of very fine linen. The European women over a petticoat, which falls very low, wear a gown made like a ſhirt, as long as the petticoat, and which being divided in the fore part, is kept cloſe to the body by a girdle. Their hair is formed into a ſpiral behind the head, and faſtened with two large pins, which croſs each other.

Such is the ordinary dreſs of the European ladies. The native women, in good circumſtances, who live in the town, wear dreſſes of the ſame form, but commonly black: by the country women, blue is preferred to every other colour.

The female ſlaves wear a ſort of ſhift, by way of a gown; but it is not divided before, like that of the free women.

The free men dreſs their hair with a bent comb. The ſlaves tie it up with a handkerchief.

The Chineſe, it is well known, received ſpices from the Moluccas many ages before thoſe iſlands were ſeized upon by the Europeans. The Greeks and Romans were alſo acquainted with them; and they were long objects of reſearch with the navigators who firſt penetrated into the oriental ſeas.

Thoſe precious aromatics were then confined to a ſmall number of iſlands; but have been ſince tranſplanted into very diſtant countries, where they ſucceed perfectly well. We have grounds to hope, that our colony of Cayenne, will one day rival the Moluccas, and by producing a much greater quantity of ſpices, will diminiſh their price, and bring them into more general uſe. Thoſe articles are alſo ſucceſsfully cultivated in the iſles of France and Bourbon.

We took on board the Recherche two hinds and a ſtag, with a deſign to enrich New Holland with that beautiful ſpecies of quadrupeds.

We provided a good ſtock of fowls, common ducks, and Senegal ducks, *(oies de Guinée.)*

The *cazoard* was not included among our live ſtock. That bird, though kept in the poultry-yards at Amboyna, is not very eaſily procured, not being a native of that iſland, but imported from the great iſlands to the eaſtward. It does not well agree with long voyages, and beſides its fleſh is black, tough and dry. In proportion to the room, which it would have occupied on board, that bird would have afforded us much leſs food than the poultry which we had already provided; for except its thighs which are muſcular, being intended by nature for running, the reſt of its body is of a very moderate ſize, in proportion to its height.

Our roots were chiefly potatoes and yams.

The beautiful leaves of the banana tree, and different kinds of melons adorned the ſtern of our ſhip.

We bought a good number of hogs and goats.

We took much care of our cow; although her milk was exhauſted; for it would have been impoſſible to have procured another. The ſpecies of buffalo common in India, is indeed a ſort of

domeſtic

domeſtic animal at Amboyna; but the female of that quadruped gives little milk, and being almoſt untameable, would have been very troubleſome, not to ſay dangerous, on board.

Our butcher, whoſe buſineſs it was to take care of the quadrupeds, could procure them little food but what was hard and dry, conſiſting, in a great meaſure, of the *anthiſtiria ciliata*; but happily, before we ſailed, he was enabled to provide the large ſtocks of banana trees which, for a long time, afforded thoſe animals ſucculent food. As they were allowed but little water, the abundant juice of thoſe plants were extremely ſerviceable to them.

The flour which we procured at Amboyna, was but of a middling quality, and the quantity with which they could furniſh us, was but about 11,000lbs avoirdupois. This ſcarcity, whether real or pretended, obliged us to purchaſe it at an exorbitant price.

We found at Amboyna but few articles of European proviſion. The Lieutenant-Governor, however, had a conſiderable quantity of Hamburgh beef, which is in great requeſt among navigators. That officer very willingly let our Commander have a part of it; but when we had got out to ſea, we diſcovered that his ſervants had diſhoneſtly withheld the moſt juicy pieces of the beef, and had ſubſtituted the ſame weight of the bony and tendinous parts.

The young ſhoots of the bamboo, cut into ſlices, and preſerved in vinegar, are excellent pickles, in a long voyage, and we provided abundance of them. Thoſe young ſhoots are generally very tender, if care be taken to gather them in proper time. They are ſold in the market as pulſe, for which they are a good ſubſtitute. They are often above three feet in length, and conſiderably more than an inch in thickneſs.

We alſo furniſhed ourſelves with cloves and nutmegs, preſerved in ſugar. The rind of the nutmeg is the only part fit for this purpoſe; and unfortunately the blundering confectioners had choſen ſuch as were too far advanced, as were alſo the cloves, which, having reached the ſize of middling olives, had acquired too much of the aromatic flavour to form an agreeable preſerve. A man muſt have an Indian palace, who wiſhes to enjoy thoſe delicacies. I may ſay the ſame thing of the preſerved ginger, with which we were provided.

Our ſtore of ſago was by far too great; for we uſed only a ſmall part of it. Our people never could reconcile themſelves to that food, wholeſome as it was; and, notwithſtanding all the arguments of our chief ſurgeon, they, in ſome months, conceived ſuch an averſion to it, as to give the preference to ſalted proviſions of the worſt quality.

We had but few hogſheads of wine remaining, which were fit for uſe. The only ſpirituous liquor we could procure was arrack, of which we purchaſed ſeveral hogſheads. Some navigators are too laviſh in their praiſes of that liquor, which is not even ſo good as middling French brandy.

CHAP. IX.

Departure from Amboyna—Singular Effect of the Tides—View of different Iſlands—Ravages on Board, by the Species of Cockroach called Blatta Germanica—*Run along the South-Weſt Coaſt of New Holland—Death of the Blackſmith belonging to the Recherche—A Storm drives us towards the Coaſt—We anchor in Legrand Bay—The Eſperance, while at Anchor, loſes two of her Rudder-irons—Her Mooring-chain gives Way—Different Excurſions on the neighbouring Land—New Species of Swan—Sea-ſalt found at more than one hundred Toiſes in perpendicular Height—That Phænomenon accounted for——Citizen Riche loſes himſelf on the Continent more than two Days*

Days—Departure from Legrand Bay, and Continuation of our Run along the Coaſt—Want of Water obliges us to leave it—Arrival at Cape Diemen—Caſt Anchor in the Bay of Rocks.

OCTOBER 15th.

WE only waited for a fair wind, to take our departure. At half an hour paſt ſeven A. M. having a ſmall breeze from the ſouth-eaſt we immediately weighed anchor, and about eleven o'clock, we had reached the entrance of the road, the weſtern point of which bore W. 6° 15′ N. and the eaſtern E. 6° 15′ S. our diſtance from this laſt being about 1,200 toiſes.

Our meridian obſervations gave the latitude of the moſt weſterly part of Amboyna, 3° 46′ 54″ ſouth, and its longitude 125° 53′ 28′ eaſt.

The breeze continuing all the day at ſouth-eaſt, we kept cloſe to the wind, on the larboard-tack.

One of the boys of the large Dutch Eaſt-Indiaman, which had juſt ſailed for Batavia, had hid himſelf on board the Recherche, and made his appearance at the very inſtant when the Captain of the Eſperance, acquainted the General, that he had diſcovered, on board his ſhip, ſix fugitives from Amboyna, namely, three of the Company's ſoldiers, a ſailor and two negro ſlaves. Thoſe unhappy men had made their eſcape from a country,

where

where they groaned under an almoſt equal ſtate of ſervitude!

The Commodore had allowed the people to bring pigs and fowls on board, for their private uſe; and all parts of the ſhip were lumbered with them, but eſpecially between decks; and they were the more troubleſome, as the diſagreeable odour which they diffuſed, was conſiderably increaſed by the heat of the climate.

19th. This evening, when we were in latitude 7° 10′ ſouth, and longitude 123° 14′ eaſt, the compaſs had no variation.

21ſt. This morning early, we ſaw a phœnomenon, which we had already obſerved ſeveral times, and which never fails to alarm navigators, who ſometimes, during the night, take it for the effect of breakers. The air being ſcarcely in motion, we obſerved the ſea foaming at ſome diſtance. Waves followed each other in quick ſucceſſion, and we were faſt approaching to the ſpot. A very heavy ſwell, occaſioned by the ſea receiving an impulſe contrary to that communicated to it in the preceding night, ſucceeded the agitation of the water. The cauſe appeared to me to depend on the tide ſtruggling between lands, where the currents acquire a velocity proportioned to the confinement of the channel.

About nine o'clock in the morning, we ſaw

Kiſſer iſland, extending from S. to E ¼ S. E. It is very mountainous, eſpecially on the weſtern ſide. Its greateſt dimenſion is from W. S. W. to E. N. E. It is ſituated in 8° 13′ 2″ ſouth latitude and 123° 32′ 17″ eaſt longitude.

Dark weather prevented us, till about three o'clock P. M. from ſeeing the north ſide of the iſland of Timor, although our diſtance from it was then but about 5,000 toiſes. Its lofty mountains roſe above the clouds, and during the night we had obſerved, fires at different elevations, on their ſides. Doubtleſs the inhabitants, at thoſe altitudes, find it comfortable to correct by fires the cold air of the night, and perhaps alſo they may uſe them to fray away the wild beaſts. Thoſe fires ſerved as ſo many light-houſes to direct our courſe along ſhore, when ſome gentle breezes interrupted the calm which prevailed for a great part of the night.

24th. About ſeven in the morning, we were within 2,500 toiſes of Laphao, a little Portugueſe ſettlement, on the weſt ſide of Timor, in lat. 9° 22′ 45″ S. and long. 122° 23′ 36″ E.

The Portugueſe flag hoiſted there, bore S. 30°E. They ſaluted us with five guns. A canoe with a double outrigger, immediately came off to view our ſhips, to which it very nearly approached;

but inſtantly returned towards the ſhore, without hailing us. On coming ſtill nearer the land, we ſaw both natives and canoes, upon the ſandy beach. We ſounded ſeveral times, with thirty fathoms of line; but found no bottom.

About four o'clock P. M. we ſaw the Iſland of Batou, bearing ſouth-eaſt, diſtant about 10,000 toiſes. It is ſeparated from Timor, only by an interval of 2,500 toiſes.

26th. Calms being frequent on the coaſt of Timor, we ſtood off ſhore this afternoon, by help of a breeze from the ſouth, and ſteered towards the weſt; but without finding a ſteadier wind. Thoſe calms appear to be cauſed by the heats, which at that ſeaſon of the year are the more violent, as the ſun darts his rays almoſt perpendicularly.

The continuance of the calms renders the navigation very troubleſome along thoſe coaſts, on which there is always danger of being thrown by the currents. The great irregularity of thoſe currents, renders it very difficult to conſtruct charts of thoſe coaſts; and hence the great diſagreement between thoſe which have been hitherto offered to the public.

A great number of whales of different ſpecies, ſeveral times ſurrounded our ſhip, and leaped out of the water cloſe alongſide. From the little fear with which they approached us, we concluded that they had never been purſued by fiſhers.

We were peſtered with the ſpecies of parrot called lorries, of which our people had bought a great number at Amboyna. Their piercing cries gave us no reſt in the day time. Their new ſituation, on board ſhip, did not agree with them, for they died daily. They were ſeized with convulſions for which we found vitriolic ether a palliative; but it did not preſerve their lives.

The mortality alſo ſpread among our feathered ſtock, the greater part of which were ſeized with violent diſeaſes in the eyes, in conſequence of the coldneſs of the nights; and thoſe which were deprived of ſight, ſoon died of hunger. It would, however, have been very eaſy to have prevented that diſagreeable circumſtance, by ſheltering them from the night air, with a ſail properly ſpread over their coops.

The water, which we took in at Amboyna, did not juſtify the great encomiums beſtowed upon it, for keeping well at ſea. It had already become ſo putrid, that it could not be drunk, till the inflammable air, with which fortunately it was but weakly united, had been expelled by ſtrong agitation. This unexpected decompoſition certainly aroſe from the negligence with which the caſks had been cleanſed. There remained enough of the fermentative principle of the old water, quickly to corrupt the new.

It is certainly very diſagreeable to be obliged to drink the corrupted water of ſalt marſhes; but it is encouraging to know that by agitating it ſome minutes, as I have ſhown, it reſumes its original purity.

At half an hour paſt four A. M. we ſaw, by ſtar light, the iſland of Savu, extending from W. 13° S. to S. 27° W. at the diſtance of 1,000 toiſes. We ſteered weſt, in order to paſs to the northward of that little iſland; and about half paſt nine, we were a-breaſt of the bay in which Captain Cook anchored, in his ſecond voyage, after having paſſed Endeavour Straits. We diſtinguiſhed five canoes plying very near the ſhore, where they were ſheltered from the waves, which ſpent their force upon a little reef, level with the water.

The iſland of Savu preſents an enchanting proſpect; being interſected, eſpecially towards the ſouth-weſt, by very beautiful hills, whoſe gentle declivity ſeems to offer to the natives a ſoil of eaſy and favourable cultivation.

Groups of cocoa-nut trees ſcattered on the ſhore, afford ſhelter to ſome cottages, which additionally embelliſh thoſe charming plantations.

That iſland, on which the Dutch have a ſmall ſettlement, is in 10° 25′ 48″ S. lat. and 119° 45′ 19″ E. longitude.

About noon, a little iſland, within our view, extended from S. 46° 30′ W. to S. 57° 30′ W. at the diſtance of 7,500 toiſes. It appeared to us not to exceed 5,100 toiſes in length. Its latitude is 10° 28′ 50″ S. and its longitude 119° 56′ 17″ E.

29th. At ſix o'clock A. M. New Savu bore E. 31° 30′ S. at the diſtance of about 5,100 toiſes. That little iſland, which is very low, is in 10° 37′ 28″ S. lat. and 119° 2′ 47″ E. longitude.

At ſun-ſet, we ſaw a part of the iſland of San del Boſe, in the N. N. E. diſtant about 20,500 toiſes. It is covered with mountains of a moderate elevation, and is ſituated in 10° 27′ 4″ S. lat. and 118° 6′ 34″ E. longitude.

The poſition of a little iſland, which bore from N. 1° E. to N. 3° 30′ W. at 20,500 toiſes diſtance, was aſcertained to be 10° 27′ S. lat. and 118° 7′ 5″ E. longitude.

30th. This day the current ceaſed to ſet weſtward, and carried us ten minutes northward. The bight in the coaſt of New Holland to the ſouthward of Timor, probably cauſes this different direction of the currents, which conſtantly ſet from eaſt to weſt through Endeavour Strait; for they ſoon reſumed their weſterly direction, and carried us from 20 to 24 minutes daily.

It muſt be obſerved, that Captain Cook, after having paſſed Endeavour Strait, experienced, like us, a change in the currents, for twenty-four hours, but in a ſtill greater degree than we did.

31ſt. After loſing ſight of San del Boſe, we met with no other land till our arrival on the ſouth-weſt coaſt of New Holland. The light winds which we experienced, made us apprehenſive, that we ſhould arrive on that coaſt, too late to finiſh our ſurvey of it.

November 3d. In the afternoon of this day, we were probably at no great diſtance from ſome rocks, for we were ſurrounded with a great number of birds, which never venture far from the land, and we did not loſe ſight of them, till the approach of night.

4th. We continued to ſee many birds this day. Navigators in traverſing thoſe ſeas, ought to redouble their vigilance, in order to avoid the rocks, which thoſe birds frequent.

16th. Our ſtag fell over board during the night, through an opening, left at the extremity of the gangway, much larger than neceſſity required. Beſides this loſs, we had to regret that one of our hinds had been delivered over to the butcher's knife, becauſe it was dying with ſickneſs.

neſs. We acquainted Captain Huon with this accident, begging him to take all poſſible care of his ſtag; but it died before our arrival in New Holland.

We paſſed the Trials at too great a diſtance to have a view of them; but we ſaw a great number of birds, which doubtleſs took ſhelter there during the night.

The ſpecies of cockroach, called *blatta germanica,* had multiplied to ſuch a degree, during the months we had paſſed between the tropics, as to incommode us exceedingly. Thoſe inſects, not contented with our biſcuits, gnawed our linen, paper, &c. Nothing came amiſs to them. Their taſte for vegetable acids was ſurprizing; no ſooner was a citron opened than they attacked it; but it was ſtill more aſtoniſhing to obſerve the rapidity with which they emptied my ink-glaſs, when I happened to leave it open. The cauſticity of the vitriol which they ſwallowed, appeared to have no bad effect on them.

The ſugar extracted from the ſago-tree, which we brought from Amboyna was a bait, which they could not reſiſt. We deſtroyed great numbers of them, by mixing a ſmall quantity of that ſugar with water in a veſſel, into which they tumbled.

Thoſe inſects tormented us ſtill more in the night than in the day. They continually diſturbed our repoſe, by paſſing over any part of our bodies which happened to be uncovered.

The cockroach, called *blatta orientalis*, made its appearance on board ſoon after our departure from Breſt; but it ſoon took leave of us, and its place was ſupplied by the firſt mentioned ſpecies.

17th. This day we were carried 38′ to the north-weſt. The Trials, from which we were not far diſtant, and ſome ſhoals, doubtleſs cauſed very ſtrong currents.

19th. This day we paſſed the tropic of Capricorn. The mercury in the barometer roſe, on the ſame day, to 28 inches 5 lines, which appeared the more ſurprizing, as it varies but little in the tropical regions. It was beſides the only inſtance, in our whole voyage, in which it roſe ſo high in ſuch a latitude. Although the thermometer was not lower than 18°, we experienced a keen ſenſation of cold.

21ſt. We began to meet with variable winds, being in latitude 26° S.

Our goats daily periſhed for want of proper food. We loſt at the rate of two in the day.

28th. About five o'clock P. M. the Eſperance being to windward, had very nearly run foul of us; though the wind was favourable for ſteering. That piece of negligence in the officer of the watch, might greatly have injured the ſhips, and might have obliged us to abandon our deſign of viſiting the ſouth-weſt coaſt of New Holland, which it was our buſineſs to explore, without loſs of time. But fortunately a boom, placed in the critical moment between the ſhips, prevented the accident.

DECEMBER 6th. The appearance of ſeveral ſpecies of ſea-gulls, and other birds, which never ſtray far from the coaſt, indicated our proximity to land. The wind blew too violently from the S. S. W. to permit us immediately to ſtand in for it with ſafety. Beſides, the ſea having been ſtrongly agitated, and the horizon much obſcured with clouds, we reſolved to ſteer S. E. ¼ S. hoping that next day circumſtances would be more favourable.

At noon, we found our latitude to be 34° 12′ ſouth, and our longitude 112° eaſt.

We lay to all night, ſounding many times with 112 fathoms of line, without finding any bottom.

7th. About half paſt two in the morning, we were ſteering E. S. E. and at day-break, the Eſperance made the ſignal for land at N. E. diſtant about 15,400 toiſes. It was the weſtern extremity of the ſouth-weſt coaſt of New Holland, diſcovered by Lewen in 1622; being a low land, extending from N. W. to S. W.*

At ſix o'clock we tried, E. ¼ S. E. and when we came within 5,000 toiſes of the coaſt, we followed its direction towards the S. E. A very ſtrong gale at W. N. W. drove us at the rate of 15,400 toiſes in the hour.

The interior country was interſperſed with ſandy downs, which had the appearance of the greateſt ſterility. Thoſe ſmall hills, ſcattered on a flat country, looked at a diſtance like little iſlands. In the intervals which ſeparated them were ſome ſhrubs, the blackiſh foliage of which, indicated a ſtate of ſuffering.

The peaked rocks, which roſe in the midſt of thoſe ſandy plains, the explained formation of the downs, the baſes of which were doubtleſs compoſed of other rocks of the ſame nature, but of forms more favourable to the accumulation of the ſand by the winds.

Freſh water muſt be ſcarce in ſuch ſandy regions, where that which falls from the clouds doubtleſs penetrates to great depths, without meeting with ſtrata to ſtop their progreſs.

This morning our blackſmith was found dead in his hammock. The preceding evening he had partaken of a feaſt, which the gunners formerly uſed to celebrate with exactneſs. They had long been ſaving a conſiderable part of their proviſions for this entertainment. The unfortunate ſon of Vulcan, extenuated, like the reſt of us, by the abſtinence to which we had been condemned ſince our departure from Amboyna, had too much indulged his appetite, and we were deprived of him by a ſtroke of the apoplexy. This loſs would have been irreparable, if good fortune had not conducted on board of our ſhip, at the Cape of Good Hope, the very intelligent workman who ſucceeded him.

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* Should not this laſt bearing be S. E.?—*Tranſlator.*

At noon, being in latitude 34° 45′ 36″ ſouth, and longitude 113° 38′ 56″, the neareſt part of the coaſt bore N. E. diſtant 5,100 toiſes; and the land we ſaw, ſet from W. 15° S. to E. 40° 30′ S.

The mountains now began to aſſume the appearance of a regular chain, the higheſt of which did not ſeem to exceed 200 toiſes in perpendicular elevation. We obſerved large tracts of them entirely denuded of vegetation: in other places, feeble ſhrubs were ſparingly ſcattered, with here and there a tree of moderate height.

The mountains ſometimes preſented ſeveral chains, riſing by degrees above each other.

At four o'clock P. M. we ſaw ſome breakers near the coaſt, and a little to the eaſtward, two rocks 510 toiſes from the beach, and which we paſſed at a very ſmall diſtance. The largeſt was remarkable for a ſeparation in the middle, from which roſe perpendicularly, about twenty-five toiſes above the level of the ſea, an iſolated piece, in the form of a very flat plate. I took it and its baſe, to be compoſed of a ſort of hard grey ſtone. We admired the fine effect of the waves, which riſing to the very ſummit of the rock, aſſumed a colour perfectly white, and deſcending again in foam, diſplayed that ſingular rock, as if it had juſt emerged from the boſom of the deep.

The coaſt then extended very regularly towards E. S. E. its little bights being terminated by points, the moſt prominent of which ſcarcely advanced 1,000 toiſes into the ſea.

Being driven by an impetuous wind, we were not without apprehenſions, on finding ourſelves ſo near a coaſt which offered us not the leaſt ſhelter; but we clawed off during the night, by ſteering S. S. W. A very rough ſea from the W. N. W. made our ſhip labour prodigiouſly. Having been ſo long accuſtomed to navigate ſmooth ſeas, we had loſt the habit of ſupporting ſuch violent agitation: the wind blew in impetuous ſqualls, and allowed us to carry very little ſail.

8th. About half an hour paſt ſix this morning we ſtood to the north-eaſt, towards the land, near to which a ſtrong breeze at weſt ſoon carried us; but we fell to leeward. The coaſt then ſtretched almoſt directly eaſtward; and the interior land preſented the ſame appearance as on the preceding day. We obſerved vaſt yellowiſh tracks, which appeared to conſiſt of hard ſtone, on which we did not diſtinguiſh the ſmalleſt trace of vegetation.

At noon our latitude was 35° 17′ ſouth, and our longitude 115° 12′ eaſt. In a little time the mountains ſubſided, and we came in ſight of a vaſt plain of ſand, in which were interſperſed, at great diſtances, little hills, of which ſome formed capes, advancing a ſmall way into the ſea.

About four o'clock P. M. we paſſed a cluſter of rocks, ſituated near the coaſt, and ſcarcely covered with ſhrubs, the diſmal green of which was a proof of the ſterility of the ſoil. At ſix, we were abreaſt of a bay, of which we could not ſee the fartheſt extremity. It would have afforded us perfect ſecurity againſt the impetuous winds which blew, while we were upon that coaſt. A foreland, which advanced from the north-weſt to the ſouth-eaſt, near 5,000 toiſes into the ſea, ſome little iſlands and ſeveral rocks, ſituated at the entrance of that bay, preſented abundant protection from the winds in the offing; but the waves ran ſo high as to prevent us from ſending a boat to ſound it.

We lay to during the whole night.

Being about 2,500 toiſes from the ſhore, we had ſoundings with 42 fathoms of line, the bottom being ſhells and bits of coral mixed with very tranſparent quartzoſe ſand, which ſeemed to me an indication that we ſhould have found a good bottom in the bay which we had paſſed.

9th. During the night, a clear ſky permitted us to ſee the land, from which we ſtood off a little, having ſtill the ſame kind of bottom.

The weſt wind was not very violent, and at half paſt four in the morning, we made ſail, in order to ſtand along the coaſt, which trended towards the north-eaſt, and a little farther on, towards the eaſt and the ſouth-eaſt.

At eight o'clock we paſſed a bay, which appeared to reach 15,400 toiſes into the land, and to have an opening of at leaſt equal extent. It is expoſed to the ſouth-eaſt wind, but ſecure againſt that of the weſt.

Farther on, we ſaw in the offing ſome little rocks, not very diſtant from the ſhore.

At noon, being in latitude 34° 48′ ſouth, and longitude 116° 52′ eaſt, we ſaw, within the land, N. 4° W. a mountain more elevated than any which we had obſerved, on the preceding days. Being iſolated amidſt vaſt plains of ſand, it produced a very picturеſque effect, and appeared to be about 25,500 toiſes diſtant from the coaſt. Its ſhattered ſummit expoſed to view many irregular peaks, moſt of them perpendicular. Such peaks indeed extended over the whole mountain, which ſtretched 7,600 toiſes from eaſt to weſt. This configuration left no room to doubt, that the rocks of which it conſiſted were not extremely hard.

We had not yet ſeen the leaſt indication of inhabitants, ſince we began to coaſt thoſe ſterile ſhores. It was to be ſuppoſed, that ſome ſprings of freſh water would attract them to the baſe of that mountain ; and accordingly the ſmoke of two fires, which they had kindled, convinced us of their preſence.

About half paſt four o'clock P. M. after having doubled a cape terminated by ſome rocks near the ſhore, we came abreaſt of a bay as wide as that which we had ſeen in the morning, but not reaching ſo far into the land. The ſurrounding land was generally very low ; but we obſerved, towards its eaſtern part, ſome little hills detached

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from each other. It offers excellent ſhelter from weſt and ſouth-weſt winds; but it is entirely expoſed to thoſe of the ſouth-eaſt.

Tropical birds with red ſtreaks, and ſome albatroſſes, of a darker colour than thoſe commonly ſeen at the Cape of Good Hope, flew around the ſhip.

We lay to all night, and ſounding every hour, we had conſtantly thirty-three fathoms of water, with a bottom of grey ſand.

10th. At half paſt four in the morning, we ſtood towards N. ¼ N. E to get in with the coaſt, and we ſoon ſaw it extending from N. 2° E. to W. 25° N. A clear horizon permitted us to ſee other low lands, ſtretching towards the north-eaſt.

We ſoon after paſſed between the main land and the reefs, which were 10,200 toiſes diſtant from it. About eight o'clock, we left others, 12,800 toiſes diſtant; and it was not long till we ſaw, that a little iſland which we perceived towards the eaſt, was connected to the land by a chain of reefs which, advancing into the offing, obliged us to keep on its ſouth ſide till we had doubled it.

Three fires ſucceſſively kindled on the point of land, where the reefs originated, apprized us that the natives were on that ſpot. The produce of the ſea is doubtleſs the principal reſource of thoſe people, who inhabit ſo barren a ſoil.

At noon, we were in 34° 11′ ſouth latitude, and 118° 22′ eaſt longitude, when the little iſland already mentioned bore N. 38° W. at the diſtance of 1,020 toiſes.

Other fires lighted along the coaſt, ſent up large columns of ſmoke, intended no doubt, by the inhabitants, to let us know that they were there.

About half paſt four o'clock, we ſtood away from a little iſland, diſtant 20,500 toiſes from the coaſt. It was joined to a ſeries of reefs, which extended above 510 toiſes towards the eaſt. The lead then indicated ten fathoms water, but ſome time afterwards, twenty-one fathoms of line did not reach the bottom.

We were becalmed, a ſhort ſpace, towards the cloſe of the day; but a ſmall breeze at ſouth-eaſt ſoon ſprung up, and permitted us to ſtretch to the ſouth-weſt, which courſe we held during the whole night.

We hove the lead every hour, and had a bottom of quartzoſe ſand, mixed with broken ſhells and coral, at a depth varying from twenty-five to thirty-three fathoms.

11th. This morning, we ſtood towards the eaſt, with all ſails ſet, having a freſh breeze from the W. N. W.

At ſix o'clock A. M. The mercury in the barometer had fallen more than three lines. Although the weather was fine, this certain indication of a great loſs of equilibrium in the atmoſphere, merited ſerious attention. We nevertheleſs advanced before the wind, towards the centre of a group of little iſlands, about 5,100 toiſes from the coaſt, although we were uncertain of finding a paſſage between them, when we ſaw them at a diſtance. About ten o'clock, when we were intangled among them, we diſcovered that they were joined together by reefs. The ſky aſſumed a menacing aſpect, the horizon lowered in the W. S. W. and preſently the wind blew from that point, with the greateſt impetuoſity. It was to no purpoſe, that we ſpent a long time in ſeeking among thoſe reefs an opening, which might allow us a paſſage into the open ſea; and as we had no other than that by which we had entered, we put about, in order to gain it. The impetuoſity of the tempeſt having forced us to furl moſt of our ſails, the ſhip fell off ſo much, that we went to leeward of our intended exit. Our running rigging giving way on all ſides, our manœuvres were much retarded. Our repeated attempts to extricate ourſelves, were unſucceſsful: we always fell back into our dangerous ſituation, there to beat about, in a ſpace abounding with ſunken rocks, at different depths, on which the ſhip was in danger every inſtant of being daſhed to pieces; and it required an experienced eye to diſtinguiſh thoſe rocks, in a ſea ſo ſtrongly agitated. Citizen Raoul, a very ſkilful young mariner, in whom our Commander had great confidence, was at the maſt head, directing the movements of the ſhip. Many times we were carried cloſe to rocks concealed by the waves; but he conducted us ſafely paſt them all, though it was very difficult to diſtinguiſh them, even at a ſmall diſtance.

The Eſperance, which did not keep to windward ſo well as our ſhip, was cloſe in with the ſhore, having no other alternative than to caſt anchor or be ſtranded. About one P. M. we ſaw her at a conſiderable diſtance, in a place where we did not think ſhe could come to an anchor. She had clued up all her ſails; and we were very uneaſy about her, being apprehenſive that ſhe had ſtruck. But the ſteadineſs of her maſts ſoon removed our fears, by ſhewing us that ſhe was riding at anchor. Her diſtance, however, and the force of the wind, hindered us from diſtinguiſhing her ſignals.

We did not heſitate to have recourſe to the ſame ſhelter. The Commodore immediately gave orders to bear down under the fore-ſail; and we were ſoon alongſide of the Eſperance, which was feebly defended from the waves by a little iſland. We were adviſed by thoſe on board that frigate, to ſteer cloſe to the land, in order to obtain a better ſtation than they. In approaching near to the little iſland, we had the frightful ſpectacle of an impetuous ſea which, when it had cleared the ſouth point, opened, by its precipitate fury, a gulph which expoſed to view part of the baſe of the rock. The dread of coming too near the land induced us to let go our anchor to windward of the Eſperance, but not ſufficiently within the anchoring place, to avoid falling foul of her, if our ſhip ſhould drag her anchors. The danger was ſo much the greater, as our ſheet-anchor could not hold faſt the ſhip. The axes were in readineſs to cut the maſts, in order to give leſs hold to the wind, when our beſt bower ſecured us in our poſition.

We now rode at anchor in nineteen fathoms of water, with a bottom of quartzoſe ſand, mixed with broken ſhells.

We were violently agitated by the waves, and expoſed to almoſt the whole force of the wind; and we were apprehenſive that our cables would give way, in which caſe we muſt have been daſhed upon the rocks, where the waves broke in a tremendous manner.

In the evening, we let go a third anchor, to give us more ſecurity againſt ſuch violent agitation.

12th. The mercury in the barometer, which had ſunk to 27 inches 8½ lines, ſenſibly roſe, as ſoon as day light appeared, and announced to us the termination of the tempeſt.

The ſurge having conſiderably abated, Captain Huon ſent his boat to tell us, that on the preceding day, the Eſperance was driving towards the land ſo rapidly, that ſhe was on the point of being ſtranded, when Citizen Legrand, an officer of diſtinguiſhed merit, went to the maſt-head, in the very midſt of the tempeſt, and almoſt immediately came down, exclaiming with enthuſiaſm, that the ſhip was out of danger! He then pointed out the anchoring-place, which he had viewed, and in which he was certain that ſhe would ride in ſafety. This diſcovery ſaved both the ſhips; for the Recherche, obliged to beat about in the night among dangerous rocks, after ſtruggling as long as ſhe could, againſt the tempeſt, in hopes that a change of the wind would enable her to get into the open ſea, would at laſt have been infallibly wrecked.

We gave to that bay the name of Citizen Legrand,

grand, which will recal the ſignal ſervice which that able mariner rendered to our expedition. His advice was to come to nearer the land, and it was to be regretted that it was not followed, for the larboard chain by which the Eſperance rode gave way in the night by the force of the waves, and that frigate ſwinging by one anchor, would ſoon have been driven aſhore, if another anchor had not fortunately taken hold. That ſhip had alſo loſt two of her rudder-irons, and had no ſpare ones to replace them. They were broken by the violent ſhocks of the waves againſt the rudder, in the combined motion of pitching and rolling. The motion of pitching, all things elſe alike, is much quicker at anchor than at ſea.

From the place where we lay at anchor, we reckoned twelve little iſlands, beſides the rocks and breakers, which afforded us ſhelter. The ſea, in that vaſt baſin, ſent in very heavy waves; but fortunately we were anchored in good holding ground.

The little iſland, to leeward of which we lay at anchor, bore from S. 25° W. to W. 3° N.

In the morning, a boat was ſent thither from each ſhip, to take the ſoundings; for we intended to come nearer to it. They found every where an excellent bottom, and eight fathoms of water, at a ſmall diſtance from the land.

Some perſons, in order to get on ſhore, were obliged to plunge into the water, for the boat would have been ſtove, if it had gone near enough to ſet them on ſhore dry.

Many ſeals, of the ſpecies which Buffon denominates *petit phoque,* and Linnæus *phoca puſilla,* baſked quietly in the ſun, upon the rocks and the ſandy beach; and ſome of them allowed themſelves to be knocked on the head. It is proper to obſerve, that the figure which Buffon gives this amphibious animal, has undoubtedly been taken from a ſkin badly ſtuffed; for it repreſents the neck much ſmaller than the head, as is the caſe in moſt quadrupeds; but the ſeal being formed for ſwimming, has nearly the ſhape of a fiſh, the head being leſs than the neck.

In the ſame figure, the ears are repreſented as very open, whereas they are nearly of a conical ſhape, without any other aperture than a longitudinal ſlit. It would ſeem that nature intended to hinder the water from entering the ears of that animal; for he has the power of ſhutting them cloſely when under the water, and of opening them, though ſlightly, when he emerges.

On the ſame iſland, there was a numerous flock of ſwans, ſeveral of which allowed themſelves to be taken by the hand; but the reſt, apprized of the danger, immediately flew away. This new ſpecies, is ſomewhat ſmaller than our wild ſwan, and of an aſh-coloured grey, a little lighter on the belly. The bill is blackiſh, with a tumour of a ſulphur-yellow at its baſe. The legs are ſlightly tinged with red.

Our main-ſail had ſuffered a ſmall rent when we were ſtruggling againſt the tempeſt the preceding day. This morning we availed ourſelves of the fine weather, and ſhifted it.

13th. A ſmall breeze at ſouth-eaſt, ſucceeded the tempeſt. As the moment was favourable, we warped, early in the morning, nearer to the ſhore, from whence we were then diſtant but about 150 toiſes.

I landed on the little iſland on the ſouth-weſt of us. It is mountainous, and not more than 2,050 toiſes in length, and 1,025 in breadth.

The ſwell was not yet ſufficiently abated to allow us to land with facility. It was neceſſary for us to ſeize the moment of the higheſt ſurge for allowing our wherry, kept faſt by a ſmall painter, to come cloſe to the beach, and each time one of us leapt on ſhore. As the edge of the wherry, on which it was neceſſary to place the foot, in order to jump out, preſented an inclined plane, and the beach was ſteep, we ran the riſk of tumbling into the water, and being carried off by the ſurges, which followed each other very quickly, and from which even a good ſwimmer would have found it difficult to eſcape. That was not the only danger we had to apprehend; for we might have fallen a prey to a large ſhark, which kept at a ſmall diſtance a-ſtern. We had obſerved him hovering about the ſhip ever ſince day-break, and he followed our boat as if he longed for one of us. The chaplain of the Recherche fell into the water, and would have been devoured by that animal, if the cockſwain of the boat had not reſcued him from the danger.

Some ſailors belonging to the Eſperance, when ſtrolling upon the rocks, killed a number of ſeals of different colours; white, grey more or leſs deep, and brown, bordering upon black. They were, however, all of the ſame ſpecies, which has been denominated by Buffon *petit phoque*. Their fleſh was found very good eating.

The little iſland on which we were, was compoſed of fine granite or quartz. There were alſo quantities of feldt-ſpar and mica; this laſt in blackiſh plates. We alſo obſerved ſome few *ſpiculæ* of black ſchorl. The granite lay bare in many places. The vegetable mould, collected in the leaſt precipitous ſituations, was covered with ſhrubs, ſometimes ſo cloſe together, as not to be eaſily penetrated. I plucked a magnificent ſpecies of *leptoſpermum*, remarkable for its ſilvery leaves, and bright red flowers.

I found there ſeveral new ſpecies, belonging to the tribe of *thymeleæ* (mezereons), which have but two *ſtamina*, and of which Forſter has compoſed a new genus, under the denomination of *bankſia*. I alſo obſerved new ſpecies of the *rumex*, the *lobelia* and the *buplevrum*.

The weſtern part of that little iſland preſents, in one of its higheſt parts, a plain ſurface of calcareous ſtone, the *ſtrata* of which follow the gentle declivity of the mountain. Strata of the ſame ſtone doubtleſs formerly covered the other parts of the iſland, and maſſes of granite ſerved as their baſes; but probably they have tumbled down, and have left the ſteep places expoſed; for in the north-eaſt, where the mountains fall with a very gentle declivity, there are ſtill ſome calcareous ſtones, at a ſmall diſtance from the beach. I was not able to diſcover any ſhells, by all the ſearch I could make.

From the ſummit of that little iſland, we had a diſtant view of a part of the reefs and rocks on which our ſhips were in danger of being wrecked, before they arrived at this anchorage. Their number ſtill appalled us, and we were aſtoniſhed at having effected our eſcape from ſo many dangers.

Two ſea-gulls, a male and a female, of the ſpecies called by Buffon, *bourgmeſtre,* and by Linnæus, *larus fuſcus,* perched upon the heights at a ſmall diſtance from us. The female having been ſhot, the male frightened by the noiſe of the exploſion, took to flight; but preſently returned, and being determined not to abandon his mate, was killed by her ſide!

I alſo fired at a ſeal, which lay at a diſtance from me. Feeling himſelf wounded, and diſtruſting his ſtrength, he durſt not take to the water. Immediately another very large one, hearing the cries of that which I had wounded, came and licked the blood with apparent ſatisfaction; but at the ſight of a long-boat, which was ſteering towards them, they plunged into the ſea.

Soon afterwards, I ſaw more of thoſe animals advancing towards the beach. Before they ventured upon the land, they never failed to raiſe their bodies nearly half out of the water, and they remained ſome time in that attitude, ſmelling and gazing all round, in order to diſcover whether or not they could ſafely come and repoſe upon the rocks.

14th. As on the preceding day, I had gathered an abundant harveſt of objects of natural hiſtory, of different *genera,* it became neceſſary for me to paſs a part of this day on board, in order to deſcribe and prepare them.

About five o'clock P. M. the tents belonging to the obſervatory were ſent on ſhore to be pitched. I wiſhed to embrace this opportunity to make another viſit to the little iſland. As the tide was only beginning to riſe, a landing could ſtill be effected; but in a little time it would been impoſſible to get back to the boat, and we ſhould have been obliged to paſs the night on ſhore. This conſideration prevented ſeveral of my companions from landing. The interval to be got over before reaching the ſhore, was about twenty feet, and at every ſurge, the water roſe there above ſix feet perpendicularly. There was a neceſſity for ſeizing the moment between the two ſurges, or of running the riſk of being ſwept into the ſea, an accident which actually happened to the ſurgeon's mate of the Recherche. He had told us before hand, that he would get on ſhore with dry feet; but not being ſufficiently quick in his motion, he was hurried along the ſhore by a violent ſurge. Fortunately he could ſwim, and returned towards the boat; but in a very different plight from what he had ſuppoſed, when he boaſted of his agility.

Thoſe who had landed were obliged to paſs the night on ſhore, without any other proviſions than a few biſcuits. Urged by thirſt, they ſcrambled in a very dark night, above 1,000 toiſes, over rocks, in order to procure water, and, to add to their misfortune, they found it brackiſh.

Enormous ſharks, of the moſt common ſpecies, the *ſqualus carcharias,* frequently appeared in the baſin where we lay at anchor. On board the Eſperance, they caught one which was about thirteen feet in length, and of more than proportionable bulk.

As every circumſtance convinced us of the impoſſibility of renewing our ſtock of water, the officer ſecond in command ordered, that each perſon ſhould be allowed only three quarters of a bottle daily. At the ſame time he, as well as the Commander in Chief, uſed it without reſtriction. I thought, however, that water was one of thoſe articles, the enjoyment or privation of which ought to have been extended to all, without diſtinction.

15th. The geographical engineer of the Recherche, ſet out at day-break, in the barge, to ſurvey the little group of iſlands, to examine whether there was any paſſage to the eaſtward, between the rocks, and to look out for a proper watering place. I ardently wiſhed to have joined this expedition; but as geographical operations have but little connection with reſearches in natural hiſtory, we were not apprized of the hour of departure, for which every thing was arranged ſo clandeſtinely, that I knew nothing of it, till the barge was puſhing off from the frigate.

The impoſſibility of getting a boat to convey me to the main land, made me reſolve to paſs this day, on the iſland in the ſouth-weſt, the ſea-line of which I traced, ſetting out in a north-weſterly direction. I ſoon arrived in the ſouth-weſt part of the iſland, near the moſt elevated land, where I found a little rill of freſh water, iſſuing from a fiſſure in a granite rock. This diſcovery diffuſed great joy among us; for we had been for ſome time reduced to very ſhort allowance of that article.

Very near that rill, I ſaw ſome cavities full of limpid water, which I had reaſon to believe as freſh as that which iſſued from the rock; for it was more than 200 toiſes above the level of the ſea. But I was miſtaken: it was very ſalt, and farther on, other excavations filled with the ſame water, were bordered with cryſtals of ſea ſalt in *laminæ* ſo thin, that at a certain diſtance, they reſembled glaſs. This fact having been mentioned on board by thoſe who accompanied me, ſome perſons, in order to account for the phenomenon affirmed, that the waves muſt beat up to that height in bad weather, notwithſtanding the coaſt was guarded by very large rocks; although indeed they were but at a ſmall diſtance from the baſes of the mountains.

As the rill, which was very weak, furniſhed ſlowly the water neceſſary to quench our thirſt, we were obliged to remain beſide it, when preſently ſome little drops of the ſalt water with which we were wetted, convinced me that the air raiſed to the place where we ſtood, the ſea water, attenuated by impinging againſt the rocks. It was not long till our clothes were covered with it, as if we had been expoſed to a ſlight fog; and this water had loſt none of its ſaltneſs.

Some birds came to our retreat to quench their thirſt. There I killed the charming yellow turtle dove, remarkable for ſix or eight golden feathers towards the baſes of its wings, and which induced White to call it The golden winged pigeon (ſee page 43, where he has given a good figure of it). I had before found the ſame ſpecies at Cape Diemen.

There we alſo caught many penguins, of the ſpecies called *aptenodyta minor*, and which Captain Cook likewiſe met with at New Zealand. They were in the ſame manner concealed in very deep holes in the rocks, from whence it was frequently very difficult to expel them.

The ſummit of one of the higheſt mountains, which I viſited this day, for the firſt time, was formed of calcareous ſtone diſpoſed in ſtrata almoſt horizontal, ſimilar to thoſe which I had before met with on thoſe heights. It was of a very fine grain, with ſome few ſmall cavities. I did not there obſerve any ſhells. It may be preſumed, that that conformation was the effect of a ſlow depoſition of calcareous matter in a ſtate of ſolution.

The change of the ſoil preſented me with ſome plants, which I had not yet found.

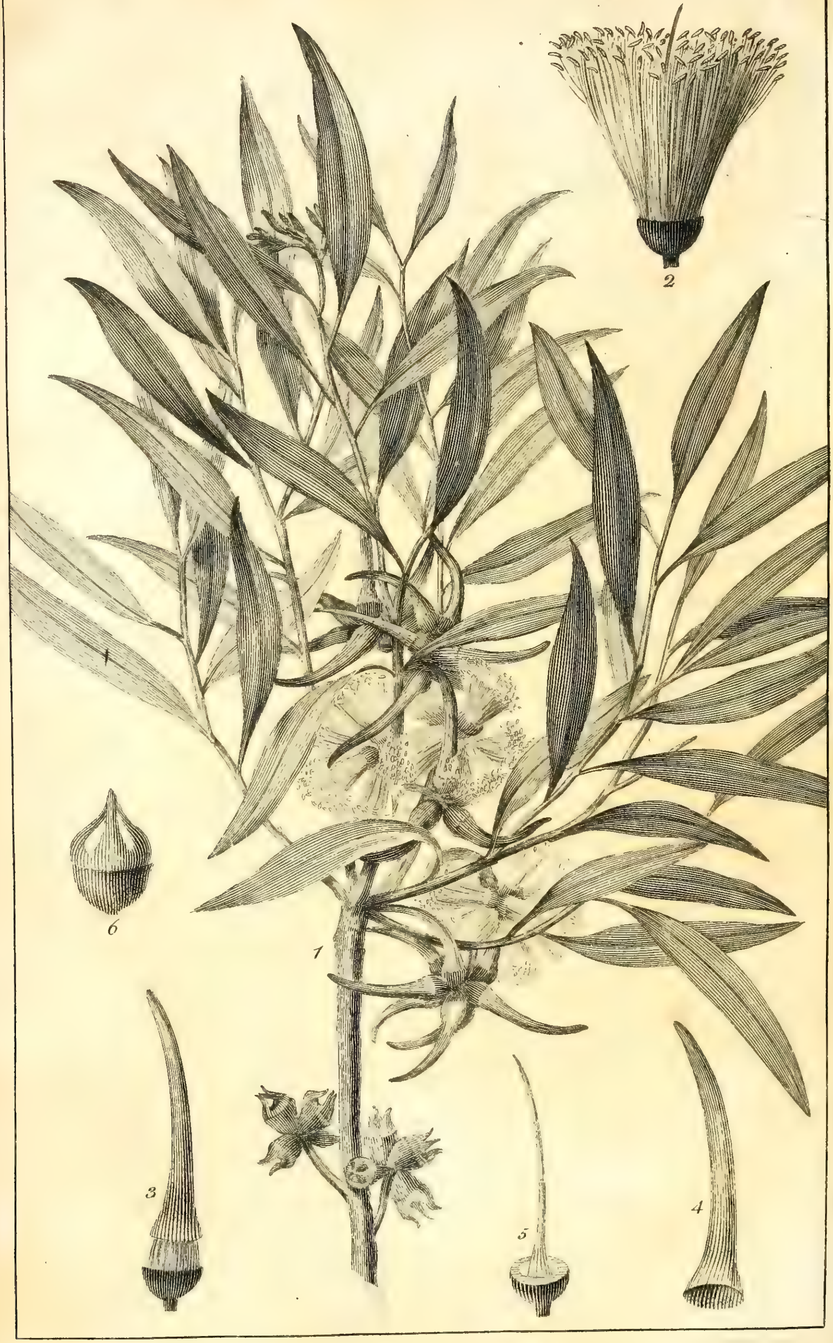
I gathered a new ſpecies of very tall *(ſaillante) eucalyptus*, of which the following is a deſcription:

The moſt elevated twigs of that ſhrub, are not above thirteen feet in height. They are ſmooth, are furniſhed, chiefly towards the extremity, with leaves, alternate, oval, elongated, ſlightly bent, and about four inches in length.

The flowers are ſeſſile, and generally eight or ten in number, at the extremity of a common peduncle, about an inch and one-fifth in length, having all the characters of the genus *eucalyptus*. Their ſtamina, which are very numerous, have long filaments of a yellow colour. The ſtyle projects a little over the ſtamina.

The calix is very much elongated, and is

puſhed



Eucalyptus Cornuta.

Pub^d. by I. Stockdale, Piccadilly, 15th April, 1800.

puſhed outwards by the ſtamina, in proportion as they are developed, and it falls when they have acquired their full growth.

The capſule is open at top, and furniſhed with three cells and ſometimes four. It is ſurmounted by a ſmall portion of the baſe of the ſtyle, which is divided into as many parts as there are cells.

Every cell contains a great number of angular ſeeds.

The form of the calix has induced me to give it the name of the *eucalyptus cornuta.*

Explanation of the Figures. Plate XVII.

Fig. 1. A branch of the *eucalyptus cornuta.*

Fig. 2. A flower diſengaged from its calix, in order to expoſe to view the ſtamina and the ſtyle.

Fig. 3. A flower, whoſe detached calix ſtill envelopes the ſtamina.

Fig. 4. The calix.

Fig. 5. The ovarium.

Fig. 6. The capſule.

After having reſolved to paſs the night on ſhore, we ſought for a commodious retreat, and found at laſt an excavation in a rock, where we were for ſome time perfectly ſheltered from the wind and the rain which overtook us at the cloſe of the day. The cold was ſufficiently keen to induce us to kindle a fire, and as we had not much proviſions,

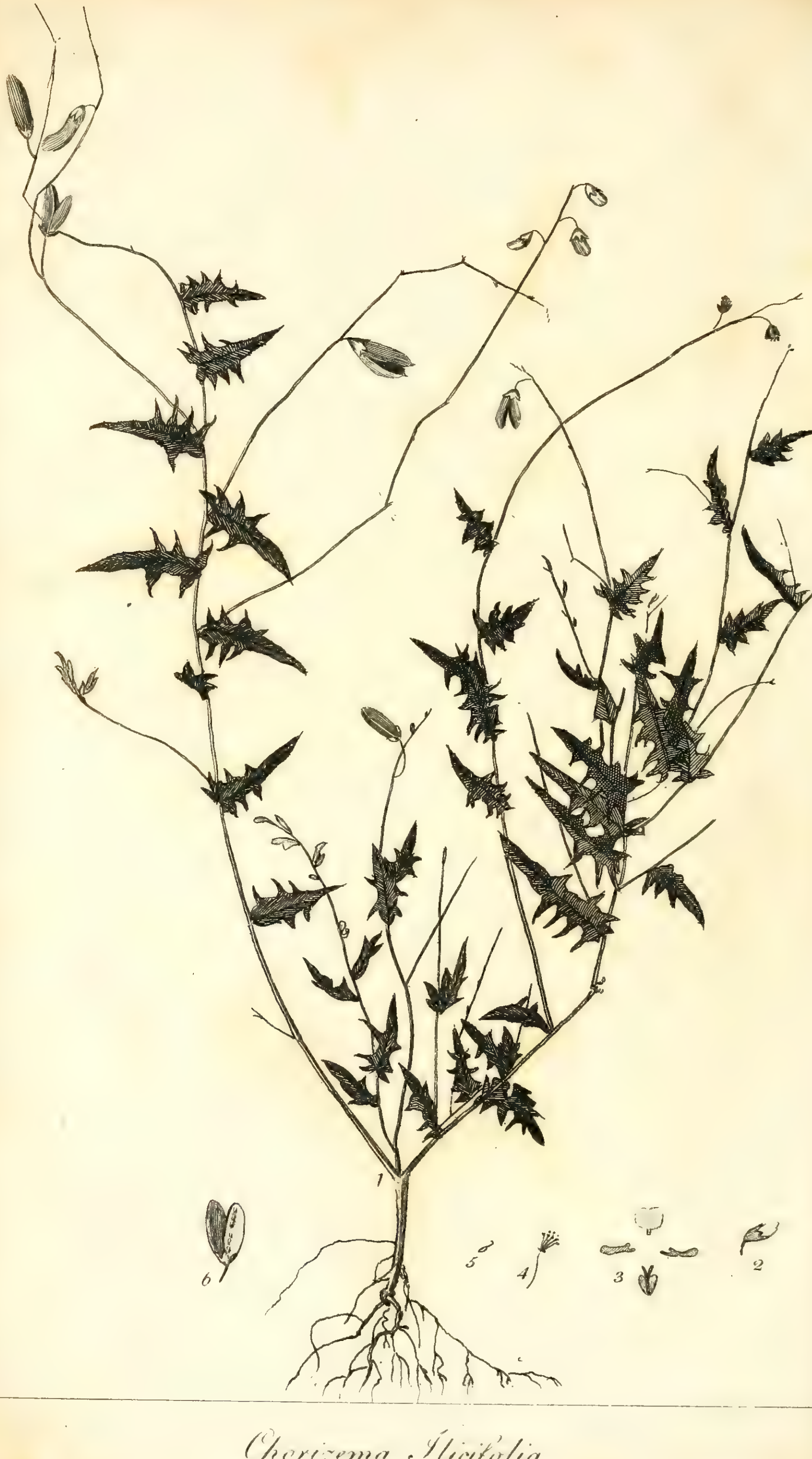
viſions, after I had choſen from among the birds I had ſhot, thoſe which I wiſhed to preſerve for my collection, I gave the reſt to my companions to be broiled. We were expecting to make a hearty ſupper, and to ſleep ſoundly, when all on a ſudden, the wind chopped about and blew directly into our grotto, which we were immediately obliged to abandon, to avoid being ſtifled by the ſmoke of our fire. This change of weather made us regret that we had not returned on board; for the wind was ſo ſtrong as to extinguiſh our fire, before our penguins were ſufficiently broiled, but yet we found them very good.

At this repaſt, the ample ſupply of water, which we had brought from the top of the mountain, agreeably reminded us, that here at leaſt, we could drink without reſtraint.

16th. At day-break I advanced towards the ſouth-weſt. Among many other vegetable productions, I diſcovered at the baſe of the mountains, in a marly ſoil, a leguminous plant, which ought to be ranked among thoſe the corolla of which is papilionaceous, and the filaments of their ſtamina ſeparate from each other.

It forms a new genus, which I call *chorizema.*

The calix is in one piece, and divided into four parts on its borders. The upper diviſion is large, hollowed, and longer than the reſt. The three



Chorizema Ilicifolia.

Pub.d by I. Stockdale, Piccadilly, 15th April, 1800.

three lower ones are equal among themſelves, ſtrait and terminated by a point.

The ſuperior border of the vexillum is hollowed, and almoſt entirely covers the alæ of the carina.

The ſtamina, which are ſix in number, are all ſeparated from one another.

The ovarium is oval, elongated, and terminated by a recurvated ſtyle.

The pod is oval, and filled with a great number of black and almoſt ſpherical ſeeds.

This plant is perennial, and its leaves are ſimple, alternate, ſeſſile, coriaceous, long, dentated, and have two little ſpines for ſtipulæ.

The form of the leaves has induced me to delineate this ſpecies, under the name of *chorizema elicifolia*.

Explanation of the Figures. Plate XXI.

Fig. 1. The plant.

Fig. 2. The flower.

Fig. 3. The expanſion of the petals.

Fig. 4. The ſtamina; the corolla and the calix having been removed.

Fig. 5. The ovarium.

Fig. 6. The pod.

Very early in the morning the Eſperance had ſent a boat to the main land, with a view to ſome aſtronomical obſervations. Citizen Riche had alſo landed there. The rendezvous was fixed for two o'clock in the afternoon, at the landing place; but the boat's crew waited in vain till ſeven in the evening, when they were obliged to return to the ſhip, from their want of proviſions, and the dangerous ſituation of the boat, if the ſurge had riſen ever ſo little. They left upon the beach a written note, acquainting Citizen Riche, in caſe he ſhould return thither, that they would return and take him off very early the next morning, if the weather would permit.

The geographical engineer, who had been ſent to ſurvey the little iſlands, returned in the evening, having determined the poſition of more than twenty of them, ſcattered in the ſpace of a degree in longitude, and as much in latitude. He landed in ſeveral places, without finding a commodious watering place, and the only rill of freſh water which he diſcovered could ſcarcely furniſh a ſufficiency for the daily conſumption of the ſhips. But he had found an anchoring place, behind the point of the main land, which bore from us, E. N. E. but it was not ſo deep as that which we occupied.

The diſcoveries of Nuyts terminated at this archipelago. We were aſtoniſhed at the preciſion with which the latitudes had been determined by that navigator, at a time when nautical and aſtronomical inſtruments were ſo imperfect. I ought to extend the ſame obſervation, to almoſt all thoſe aſcertained by Lewen on this coaſt.

For ſome days the winds had blown from the eaſt, inclining to the north in the morning, and to the ſouth in the afternoon. The ſands, ſtrongly heated by the ſolar rays, cauſed this diurnal variation. The equilibrium of the atmoſphere was not affected by thoſe winds, and hence the mercury in the barometer commonly ſtood at 28 inches, 3 or 4 lines.

17th. This day the weather being favourable, a boat was ſent in queſt of Citizen Riche. That naturaliſt, enraptured with the riches and novelty of all the productions of that region, which no obſerver had hitherto viſited, had doubtleſs been ſo abſorbed in admiration of them, that he had quickly loſt his way ; and he had not yet returned to the appointed rendezvous.

When advancing in the direction which he was ſeen to take on the preceding day, our people ſaw, at a ſmall diſtance, ſome ſavages, with whom, however, any communication was impoſſible ; for they always fled when our people offered to approach them.

The ſituation of Riche was ſo much the more alarming, as he had been abſent nearly a day and a half, a half, and as we knew that he had landed upon that ſterile ſoil without proviſions.

The boat, which returned about two o'clock in the afternoon, brought the diſmal intelligence that he was not to be found. Captain Huon immediately waited on the Commodore, in order to concert with him the meaſures, which it would be adviſeable to take, on this diſagreeable occaſion. The Commodore having ſent for the naturaliſt Deſchamps and me, Captain Huon told us the methods he had taken to recover our unfortunate colleague; ſtating to us the dangers to which he muſt neceſſarily be expoſed, in advancing alone into the interior country, where, perhaps, he had fallen by the attacks of the ſavages; in ſhort, he ſaid, he could not but apprehend the moſt fatal event, believing it to be impoſſible that he could willingly have abſented himſelf ſo long.

The nature of thoſe burning ſands, which are totally deſtitute of water, rendered all the conjectures, which we could form concerning him, ſtill more melancholy.

As our ſtock of water was partly conſumed, and we had found no means of renewing it, at that anchoring-place, Captain Huon, after repreſenting to us the diſadvantages of prolonging our ſtay, added, that it was evident any farther ſearch could only injure the expedition, without expreſſing the leaſt hope of finding our unhappy aſſociate.

Deſchamps, upon whom thoſe arguments had the deſired effect, eſpouſed the opinion of the Captain, and ſeconded his propoſition for ſailing, by declaring that it could not be diſſembled, that we could now do nothing more than lament the loſs of our friend.

Thoſe probabilities had not the ſame weight with me. But it was neceſſary for me to perſuade the ſailors; and I employed what I thought the moſt proper argument for that purpoſe, by citing, in ſupport of my opinion, an inſtance taken from the voyages of the moſt celebrated of navigators. I reminded them that, in December 1777, two ſailors ſtrayed from Captain Cook, into the iſland of Noel, one of whom was abſent a whole day, and the other eight and forty hours; that Cook had ordered ſeveral detachments to ſearch for them with the greateſt care; that Noel, however, was but a little low iſland, ſcarcely covered with ſhrubs, whereas New Holland, where Riche had loſt himſelf, was an immenſe region. I requeſted, therefore, that the ſame time ſhould be allowed to ſearch for our unhappy friend, as Captain Cook had employed in ſeeking one of his ſailors.

This reaſoning produced all the effect which I could deſire.

A boat was immediately diſpatched, from each ſhip, for the main land; and I had the pleaſure to be of the party, whoſe buſineſs it was to uſe every method, and to make every effort, to recover our unfortunate meſs-mate.

The Commodore ordered guns to be fired every half hour, to enable Riche, if ſtill alive, to direct his ſteps with the more certainty towards the anchoring place.

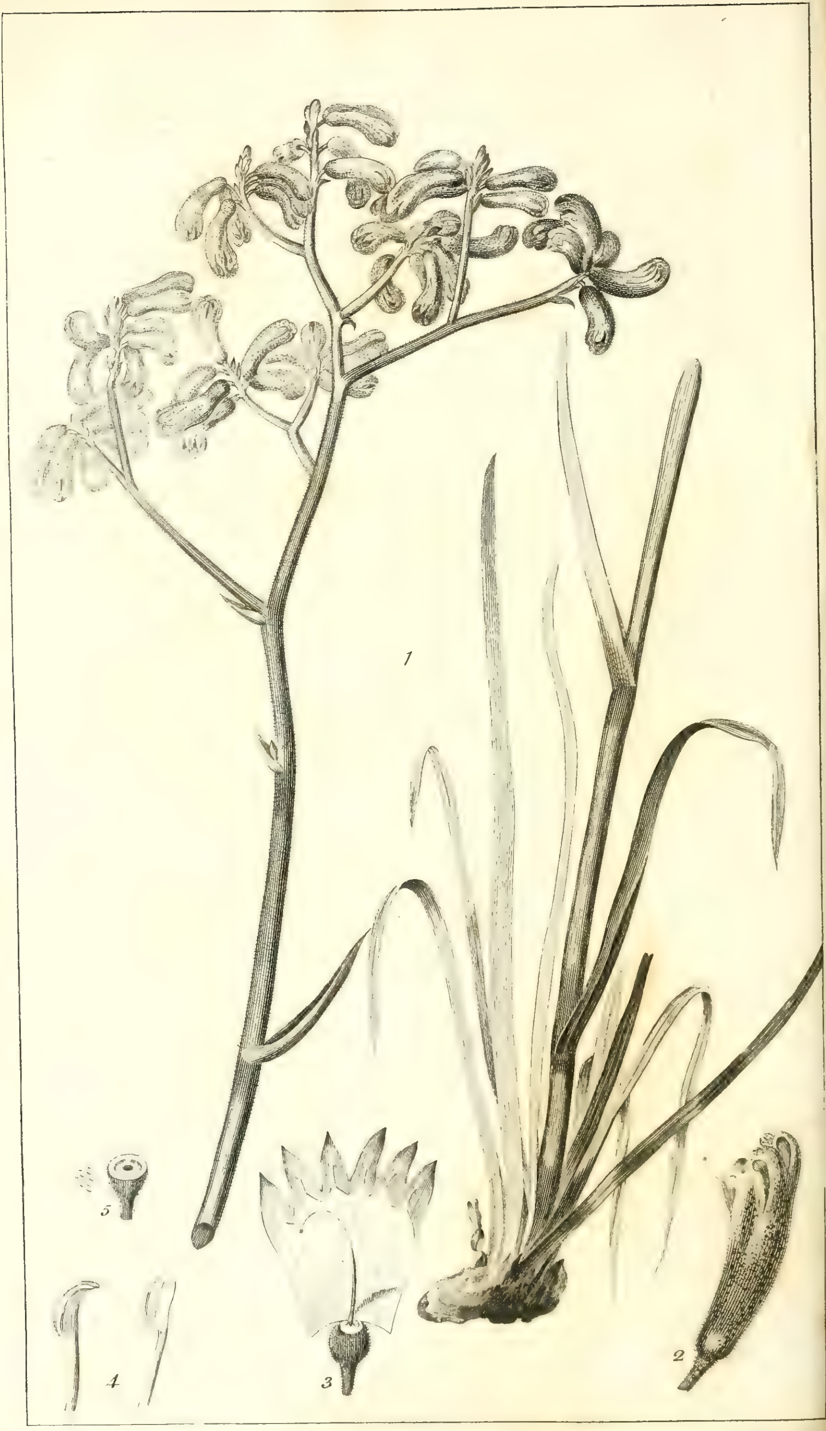
The wind favoured us, and, in a ſhort time, we made good our landing.

After having advanced into the country, in different directions, we returned to the landing place, on the approach of night.

We traverſed a track wholly covered with ſand, where we found extenſive ſpaces abſolutely deſtitute of vegetables. But I ſaw with ſurprize, on thoſe diſtant ſhores, the graſs known by the name of *ſpinifex ſquarroſus*; and thus had a new and an admirable inſtance of the facility with which plants, which grow on the ſea ſhore, diffuſe themſelves to prodigious diſtances.

In thoſe arid waſtes, grows a fine plant which nearly reſembles the *iris*, and which naturally claſſes itſelf with the genera *dilatris* and *argolaſia*. It forms, however, a new and a very diſtinct genus, principally by its irregular corolla.

I have



Anigozanthos Rufa

I have delineated it under the name of *anigozanthos.*

Its flowers have no calix.

The corolla has the form of a tube, the edges of which are divided into ſix unequal parts recurvated inwards. It is covered with reddiſh pili.

The ſtamina, which are ſix in number, are inſerted under the diviſions of the corolla, which is placed upon the ovarium.

The ſtyle is ſimple, as well as the ſtigma.

The capſule is nearly ſpherical, and of the ſame colour with the flower by which it is ſurmounted. It has three cells filled with a great number of angular ſeeds.

The top of the ſtalk is covered with reddiſh pili, like the flowers.

I have denominated this ſpecies *anigozanthos rufa.*

Explanation of the Figures, Plate XXII.

Fig. 1. The plant.

Fig. 2. The flower.

Fig. 3. The flower divided longitudinally, and expanded, in order to expoſe the ſtamina to view.

Fig. 4. The ſtamina.

Fig. 5. The capſule.

Although in the day, the heat was very powerful upon the land, we experienced a very keen cold in the night.

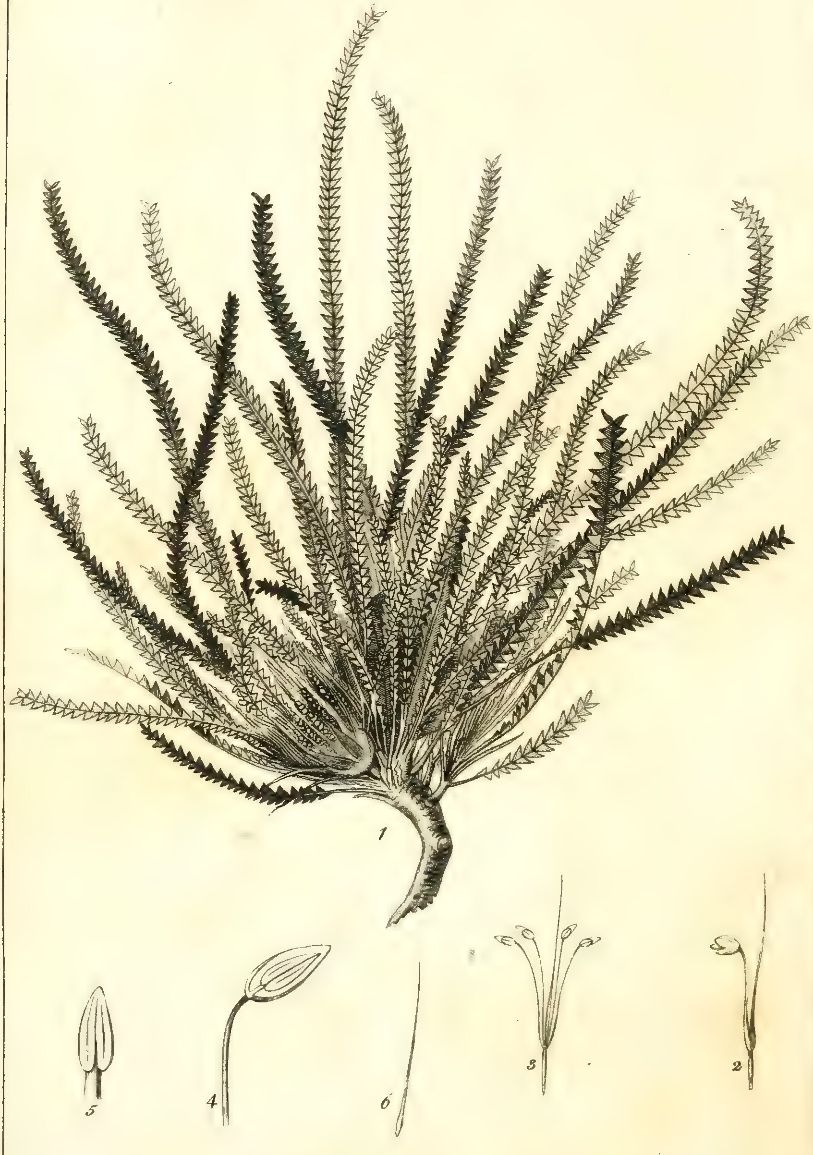
As ſoon as day began to dawn, we divided ourſelves into two parties. That which I accompanied advanced towards the north, and the other towards the north-weſt.

Directing our ſteps by the compaſs, we had proceeded at leaſt 5,100 toiſes acroſs plains of calcareous ſand, heaped up in different places, when we arrived in a very narrow bottom, where the verdure of the plants formed a very pleaſing contraſt with the diſmal places we had traverſed, and they grew in a very rich ſoil. There we ſaw ſome cavities which afforded us a little freſh water, but they were too diſtant to be of any uſe to the ſhips.

Continuing our route, I obſerved in the midſt of thoſe ſands, ſome rocks of a calcareous nature, where I collected ſome fine plants, which ſtill reſiſted the aridity of the ſoil. Among the great number of the tribe of the protea, which I obſerved there, I ſhall mention two ſpecies of *bankſia*, which I call *bankſia repens*, and *bankſia nivea*.

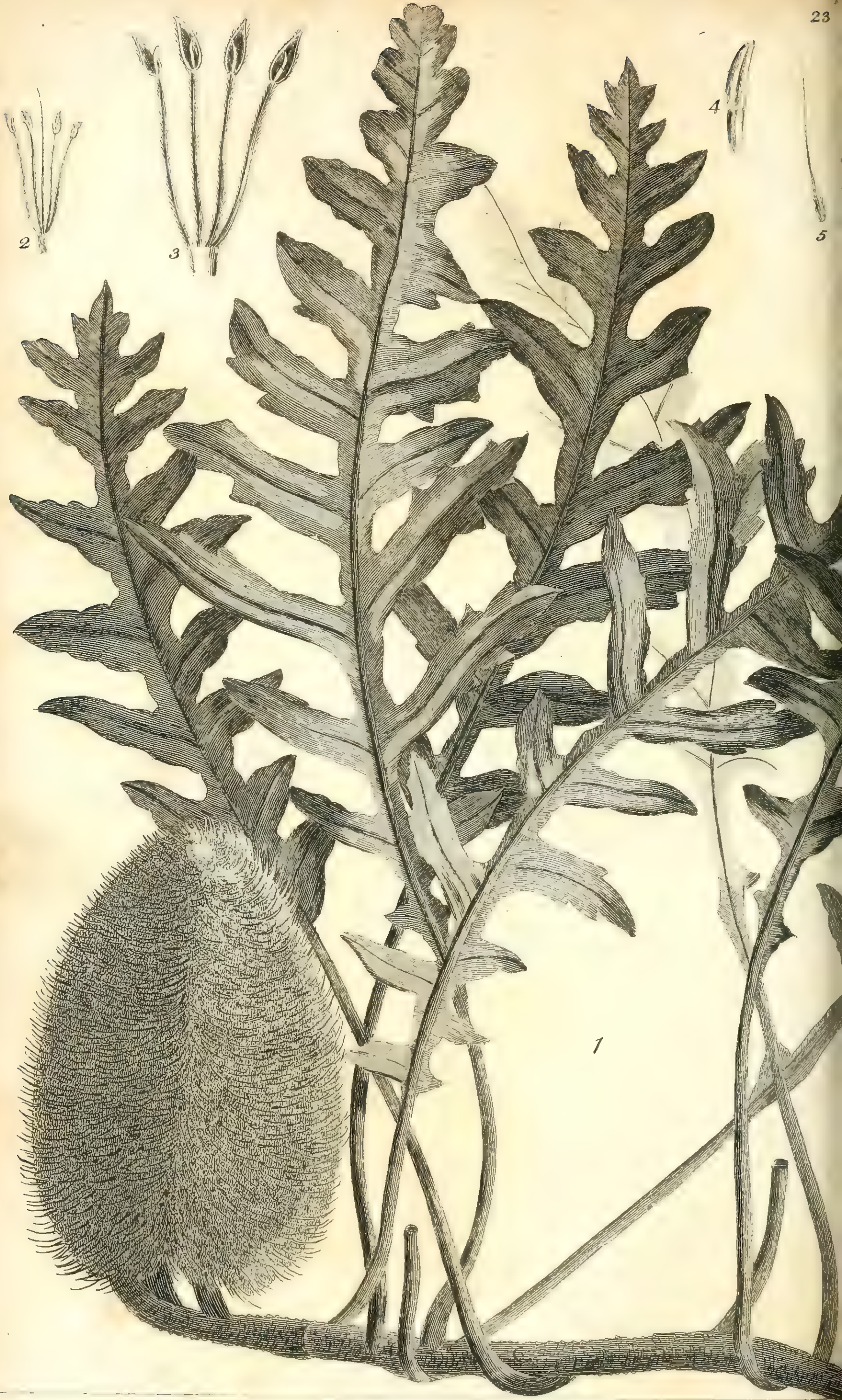
The firſt has a creeping ſtalk, thickly covered with reddiſh down, terminated by flowers joined together in a conical form.

The leaves are pinnatifid, and when very young, are



Banksia Nivĕa.

Pub.^{d} by I. Stockdale, Piccadilly, 15th April, 1800.



Banksia Repens.

Pub.d by I. Stockdale, Piccadilly, 15th April. 1800.

are coated with the ſame down as the ſtalk; ſo that one would take that plant for ſome ſpecies of *acroſtichum*; but when more advanced in age, they are very ſmooth.

Explanation of the Figures, Plate XXIII.

Fig. 1. The plant.

Fig. 2. The flower.

Fig. 3. The corolla divided tranſverſely, and viewed through a magnifying glaſs.

Fig. 4. The ſtamina magnified.

Fig. 5. The ovarium, with the ſtyle and the ſtigma.

The ſpecies of *bankſia*, which I call *nivea*, is remarkable for its long leaves, dentated very deeply, and white on the under ſide.

Explanation of the Figures, Plate XXIV.

Fig. 1. The plant.

Fig. 2. The flower.

Fig. 3. The corolla expanded.

Fig. 4. A part of one of the diviſions of the corolla, viewed through a magnifying glaſs.

Fig. 5. The ſtamen, viewed through a magnifying glaſs.

Fig. 6. The ovarium ſurmounted by its ſtyle.

I alſo found there the *eucalyptus cornuta*, and many other plants of the myrtle tribe.

At the end of four hours very quick walking, we arrived on the banks of a great lake which has a communication with the ſea.

The natives had recently made fires in many places which we paſſed.

We ſaw no kangarous; but their excrements, which we ſaw every where in great abundance, convinced us that that quadruped has multiplied greatly on that coaſt. We alſo obſerved excrements which very much reſembled thoſe of the cow; but we did not ſee the animal to which they belonged. We ſaw in the ſand the prints of a cloven hoof, more than three inches in breadth. There is no doubt that that region is inhabited by animals much larger than the kangarous. It affords but little food for birds; and accordingly I found none in this excurſion except two ſpecies, a *muſcicapa,* which I afterwards met with in the Moluccas, and the fine ſpecies of red creſted cockatoes, *pſittacus moluccenſis,* which are met with in the ſame iſlands, in flocks of many hundreds. When I attempted to approach them, they always removed to a great diſtance, flying rapidly with ſudden ſtarts, and emitting loud and very diſagreeable ſhrieks.

The banks of the lake, which we followed for ſome time in approaching the ſea, are ſomewhat marſhy. The lake extends a great way into the land; for the other party, who proceeded towards the north-weſt, alſo arrived on its banks. Some of them came to our rendezvous to acquaint us, that they had obſerved on the very edge of the lake, towards the part fartheſt from the ſea, the prints of ſhoes, which left no doubt that Riche had paſſed that way; but that the marks of naked feet which appeared near his, gave grounds for apprehending that he had been dragged by the ſavages into the interior country. What tended to give ſtill more probability to this conjecture was, that they ſoon found his handkerchief upon the ſand, and a little farther on, one of his piſtols. At a ſmall diſtance, they ſaw a little ſmoke from a deſerted fire, around which they found ſome bits of paper, on which they recognized the handwriting of Riche; and beſides, the ſand ſtill bore the marks of one who had been reſting himſelf on the ſpot.

We returned towards the landing place, lamenting the fate of our unfortunate meſs-mate, and had very nearly reached the ſhore, in a hopeleſs ſtate of mind, when we ſaw one of thoſe who had been left to take care of the boat, running to meet us with the pleaſing intelligence, that Riche was ſtill alive, and that he had juſt arrived at the landing-place, extenuated with hunger and fatigue. He had been above fifty-four hours on ſhore, with no other proviſion than ſome bits of biſcuit. The famiſhed ſtate to which he was reduced, rendered it imprudent for his friends to allow him to indulge his appetite, and in giving him food we tried gradually to bring into action the digeſtive powers of his ſtomach. His appearance, at firſt entirely diſcompoſed, became by degrees re-animated. When he had recovered from the ſtate of ſtupor into which he had been thrown by ſo long a privation of nouriſhment, he told us that, near the fire which we had found ſtill burning, there was a little rill of freſh water, at which he had quenched his thirſt; and that, by dint of ſearching among the plants, analogous to thoſe which yield eſculent fruits, he had diſcovered a ſhrub of the tribe of plaqueminiers which furniſhed him with ſome ſmall fruits; but in a quantity inſufficient for the ſupply of his neceſſities. On the firſt day of his abſence, he found the ſpring, near which his things had been picked up. There he paſſed the night, and the next day he ſpent wholly in ſeeking the anchoring-place, without being able to find it. In all this painful peregrination, he had not met with a drop of water; but chance happily conducted him in the evening to the ſame ſpring, where he paſſed the ſecond night. Having ſeen ſavages at a diſtance, he had attempted to obtain ſome intercourſe with them, in order to know their manner of ſubſiſtence, and to aſk them for ſome food; for he was violently tormented with hunger; but they always fled, when he was advancing towards them. They frequently ſet fire to the dried graſs which was diffuſed over the ſand. In that climate, men not being under the neceſſity of wearing cloaths, they were all abſolutely naked.

Some cazoards and kangarous of the large ſpecies, were the only animals ſeen by Riche. Although in a ſtate of weakneſs, he had carried for two days a numerous collection of very intereſting productions; but, during the third day, his ſtrength ſunk ſo rapidly, that it was with great difficulty he could trail himſelf along the ſhore, in queſt of the ſhips, and in thoſe circumſtances, he was obliged to abandon his whole collection, not being able to reſerve even the moſt precious articles.

As ſoon as he had a little recovered his ſtrength, we conveyed him towards the ſhips. It was to little purpoſe that we made the ſignals agreed upon to announce our ſucceſs. Every one was ſo convinced before hand of the inutility of our reſearches, that they did not underſtand the meaning of them, till we had come cloſe to the ſhips, and Riche was ſeen in the midſt of us. The horrible ſituation in which he would have been, if the opinion entertained by ſome perſons concerning him had prevailed, ought to be an alarming and dreadful leſſon to captains and naturaliſts who undertake long voyages; for, if we had quitted that anchoring place the day before, his exiſtence would have been terminated by a moſt frightful death, in all the anguiſh of the moſt terrible deſpair.

Though it was demonſtrated by this fact, that it was poſſible for a man to loſe himſelf for more than two days in that country, the greater part of our ſailors choſe to be of a different opinion; ſome of them being more willing to believe and to ſay, that Riche had deſignedly abſented himſelf; as if it could be believed, that he would wantonly expoſe himſelf to all the horrors of famine.

During our ſtay at that anchoring place, we could not fiſh with the ſeine. But on board the ſhips, ſome fiſhes were caught with the hook, among which were the *labrus cyprinoides,* and ſeveral new ſpecies of the genus *perca.*

We lay at anchor, in latitude 33° 55′ ſouth, and longitude 119° 82′ eaſt.

The variation of the compaſs was found to be 6° weſt.

19th. All the boats having been got on board over night, we waited for the morning to weigh anchor, if the wind ſhould ſerve. It ſhifted from the N. E. to the E. S. E. and at ſix o'clock A. M. we were under ſail.

Paſſing to the northward of the little iſland which had ſheltered us, we advanced into the open ſea.

At noon, being in latitude 34° 12′ 54″ ſouth, and in longitude 119° 21′ eaſt, the moſt ſoutherly of the rocks bore E. 2° S. diſtant about 3,400 toiſes, and the moſt northerly land bore N. 1° E.

For ſome days, eaſt winds prevailed, which made us apprehend great difficulties, in exploring that coaſt; and analogy gave much probability to that ſuppoſition; for at the Cape of Good Hope, which even extends ſome degrees farther to the ſouthward than that part of New Holland, eaſt winds alſo predominate at the ſame ſeaſon of the year.

24th. About noon this day, we had only reached 34° 24′ ſouth latitude, and 120° 22′ eaſt longitude; and the little iſlands at which we had anchored were ſtill in ſight.

The eaſt wind blew very freſh in the afternoon, but in the evening, we had a hot ſuffocating breeze from the land. Immediately we were enveloped in a very thick fog, the air being loaded with a humidity which pervaded every thing. I can compare it to nothing ſo properly, as to thoſe fogs which ſoutherly winds diffuſe over the Mediterranean, near the African coaſt, in a very hot ſeaſon. The ſands, heated by the ſolar rays, had communicated to the atmoſphere an additional power of retaining water, and we found ourſelves immerſed, as it were, in a vapour bath of a moderate temperature.

About eleven at night, we loſt ſight of the Eſperance, which did not anſwer the ſignals we made, till three hours afterwards, when we heard a very diſtant report of a gun.

25th. The breeze was weak: we plied cloſe to windward; and when day-light appeared, we ſaw the Eſperance at a ſmall diſtance. The wind ſoon began to blow forcibly from the ſouth-weſt; and for ſome time, we went at a great rate towards the eaſt.

At noon, we were in 34° 14′ ſouth latitude, and 121° eaſt longitude; and two hours afterwards, we perceived behind ſome little iſlands, a large bight, which appeared to offer us excellent ſhelter.

The natives announced their preſence by the ſmoke of fires, a great way from the ſhore, and from each other.

The barometer having deſcended ſtill lower than when it foretold the tempeſt, which forced us to anchor in Legrand road, we ſtood off ſhore, to avoid being embayed on that dangerous coaſt. We afterwards lay to, for the whole night, keeping the ſhip's head towards the ſouth and S. S. E.

There was a very heavy ſea: the wind blew impetuouſly from the S. W. and the W. S. W. and increaſing gradually, it raged with the greateſt violence for almoſt the whole night, raiſing the waves to a prodigious height. We had never yet been ſo violently toſſed by a tempeſt.

The ſouth-weſt winds there are almoſt always impetuous, and add very much to the dangers to which ſhips are expoſed, in coaſting from weſt to eaſt, along that low ſhore, frequently lined with ſhoals; and there is danger of their not being perceived ſoon enough to be able to double them.

When day-light appeared, we ſtood in for the land. A wind from W. S. W. brought us back fine weather.

Towards noon, we were in latitude 33° 42′ ſouth, and longitude 122° 4′ eaſt, when we ſaw from the maſt-head, beyond ſeveral little iſlands, a part of the coaſt, extending from weſt to north-weſt, and which ſtill appeared low. Preſently it aſſumed the appearance of a bank, raiſed in a very uniform manner, trending towards the eaſt, and intercepting our view of the land. At the approach of night, we clawed off ſhore, and afterwards lay to.

27th. The next morning, we continued to follow the coaſt, and about three o'clock P. M. our diſtance from it was but 1,000 toiſes. It uniformly preſented the ſame appearance, for more than 15,400 toiſes. We perfectly diſtinguiſhed thin horizontal ſtrata, of the ſame form with the calcareous rocks, which I found in Legrand road.

I am inclined to believe, that this interruption of mountains, through ſo great an extent, is the work of the waters, which appear to have undermined the ſtrata, making them ruſh into the ſea, where they form a rampart which renders that coaſt inacceſſible. We obſerved little ſlopes, which they had formed in ruſhing down, but which it would have been very difficult to climb. We had approached it ſo nearly, that it became neceſſary to get into the offing, where we found twenty fathoms of water, with a bottom of calcareous ſand.

28th. Very early in the morning, we ſaw the land trending towards the north-eaſt, and with the wind at ſouth-weſt, it was eaſy for us to follow all its windings. It always preſented the ſame ſteep rampart, which roſe very uniformly to the height of about forty-five toiſes, and preſented, from its top to the level of the ſea, the parallel ſtrata of which it is compoſed.

About noon, the coaſt inclined a little towards the ſouth-eaſt, and changed its appearance, being then interſperſed with little ſandy hills, which, falling with a gentle declivity, were bounded by a very low beach. The ſea then aſſuming a greeniſh appearance, even in the diſtant offing, indicated a change of bottom; but a line of fourteen fathoms could not reach it.

The wind ſoon began to blow very freſh. Experience had taught us to dread the ſouth-weſt winds, on that coaſt, which had almoſt always become impetuous; and therefore we ſtood S. E. ¼ E. to get into the offing.

The want of water began to be ſeverely felt on board of both the ſhips, and it was evident that if we could not immediately find a ſupply of that article, we muſt in a ſhort time abandon that coaſt. But if we had begun with its moſt eaſterly part, and coaſted it from eaſt to weſt, we would have had the advantage of getting a full ſupply of water at Cape Diemen; whereas, the half of our's was conſumed, when we began to explore the coaſt, at its moſt weſterly point. This conſideration, among many others, is a ſtrong inducement to coaſt it from eaſt to weſt. Beſides, the impetuoſity of the weſt winds expoſes ſhips to the greateſt dangers; while the eaſt winds, which are the moſt conſtant, never blow with violence.

29th. We were but 1,020 toiſes from the coaſt, when the lead indicated a bottom, ſometimes of coarſe ſand, ſometimes of rock, the depth varying from nine to twelve fathoms.

At noon, our latitude was 32° 10′ ſouth, and our longitude 124° 52′ eaſt, the neareſt land bearing N. N. W. diſtant 340 toiſes. It ſet by compaſs from N. 69° W. to E. 20° N. In a little time, it reaſſumed the form of a rampart, like that which we had already coaſted; but with this difference, that its upper part roſe by a gentle elevation into the interior country. We obſerved ſome ſhrubs, which did not ſeem to be in ſo ſuffering a ſtate, as thoſe which we had ſeen hitherto on the ſame coaſt.

The ſea was covered with the ſpecies of fucus, called *fucus natans,* and by the French *raiſin de mer.*

JANUARY 1ſt, 1793. Having been oppoſed by the eaſterly winds, we had only reached, about noon this day, 32° 8′ ſouth latitude, and 126° 42′ eaſt longitude, when we ſaw a fog riſe, which every where repreſented a flat ſhore; and ſo ſtriking was the illuſion, that perſons who came from between decks, thought that we had entered ed into a vaſt baſin. We were, however, at the diſtance of 10,200 toiſes from the coaſt, which the fog concealed from our view.

In the evening, the ſky lowered on the land ſide, and flaſhes of lightning darted from the thickeſt clouds. Then the fog, which encircled the horizon, diſſipated, and the wind ſhifting to the weſt, became very freſh.

4th. In the evening, Captain Huon acquainted the Commodore with the damage which the rudder of the Eſperance had ſuſtained. At the ſame time, he told us, that on board of his ſhip, they had long been reduced to an allowance of three quarters of a bottle of water per day; that they had been obliged to diſcontinue the diſtribution of antiſcorbutic draughts; and that thirty butts of water then compoſed the whole ſtock on board the Eſperance.

5th. About ſix o'clock this morning, our Commander ſent Captain Huon a letter, letting him know the reſolution which he had come to, reſpecting the ſituation of the two ſhips.

At noon, our latitude was 31° 52′ ſouth, and our longitude 129° 10′ eaſt, and we had ſight of the land from E. to N. 10° W. being 5,100 toiſes from the neareſt part of it.

As ſoon as the boat was hoiſted in, we ſtood cloſe on our courſe on the larboard tack, with the wind at E. S. E. ſteering for Cape Diemen, and abandoning an extremely arid coaſt, along which we had held our courſe, above 820,000 toiſes, in the general direction of W. ¼ S. W. to E. ¼ N. E. Fifteen months before us, Vancouver, equally oppoſed by the eaſt winds, had been forced to abandon his enterprize, after having explored only about 360,000 toiſes of the coaſt.

Before we approached that coaſt, we did not expect to find boiſterous winds ſo frequent, eſpecially at that ſeaſon, which might have been ſuppoſed the fineſt, in thoſe latitudes, the ſun having been then above two months in the ſouthern hemiſphere. Is this impetuoſity of the winds cauſed by the prodigious difference, which exiſts between the cool temperature of the atmoſphere over the ſea, and the ardour of the ſolar rays concentrated by the burning ſands on the main land?

The currents, experienced on that coaſt, always conform to the direction of the winds.

The Eſperance was in ſtill greater diſtreſs than we. Beſides, that frigate had ſuſtained ſeveral injuries, when laſt at anchor, and needed an excellent harbour, where ſhe might receive all the neceſſary repairs.

At ſour o'clock no land could be ſeen, even from the maſt-head; and, at the ſame time, a line of thirty fathoms reached a bottom of fine ſand, mixed with broken ſhells and lythophites. The lead was hove every two hours, and each time it was found that the depth increaſed two or three fathoms; inſenſibly augmenting with our diſtance from the coaſt.

6th. At ſix this evening, being then 102,000 toiſes from the land, a line of ſeventy-two fathoms indicated a bottom of very fine ſand mixed with gravel; and from that moment, no bottom was found, though we ſounded at different times. This gradual augmentation of the depth of the ſea near that coaſt, proves that the land ſubſides under the water by an almoſt inſenſible declivity, and gives us reaſon to believe, that it riſes in the interior by an acclivity equally gentle, ſo that thoſe heights are too diſtant to be perceived from the coaſt.

8th. We were carried on the 7th, 23′ to the weſtward, and this day 21′ in the ſame direction. At noon, we were in 35° 30′ ſouth latitude. The rapidity of thoſe currents towards the weſt, perhaps depends on ſome channel, which ſeparates the lands of New Holland and thoſe of Cape Diemen, between Point Hick and Furneaux's

Iſlands. Captain Cook, in exploring the eaſtern part of New Holland, ſaw no land in that ſpace, the extent of which is about 102,600 toiſes, and believed it to be the entrance of a great gulph. Perhaps on that part of the coaſt, a channel commences, which, after forming different ſinuoſities, opens weſtward in the ſame latitude, in which we experienced ſuch ſtrong currents.

We had no weſterly winds, till we reached the fortieth degree of ſouth latitude; and they carried us to Cape Diemen, varying from the ſouth-weſt to the north-weſt.

About ten o'clock, we ſaw at a ſmall diſtance, a great number of cetaceous fiſhes, of a new ſpecies, which appeared to me to be of the genus *delphinus*. They were eaſily diſtinguiſhed by a large white ſpot, behind the dorſal fin. The upper part of the body is of a blackiſh brown, and the belly white. The largeſt were above nine feet in length. They were preceded by a great number of dolphins *(delphinus delphis)*, and they ſwam in ſhoals like them, making, with great rapidity, nearly the ſame movements with thoſe cetaceous fiſhes.

We lay to during the night, deſigning in the morning to make the land, a degree lower in latitude than Cape Diemen. We hoped to diſcover there a harbour which would afford great advantages to future navigators, who might intend to reconnoitre the ſouth-weſt coaſt of New Holland, by availing themſelves of the ſouth-weſt wind.

19th. By half paſt four in the morning, we ſaw the land, extending from N. E. ¼ N. to E. ¼ S. E. the neareſt part bearing E. N. E., diſtant 15,400 toiſes.

For ſome time we ſtood on the ſtarboard tack, cloſe upon the wind, which blew from ſouth-weſt. Two hours afterwards, when we were not more than 7,800 toiſes from the ſhore, a line of ſeventy-five fathoms indicated a bottom of very coarſe ſand, and broken ſhells.

The ſhore we ſaw was ſteep, and at a little diſtance, was a chain of mountains, of moderate elevation, which nearly followed the ſame direction. The land was almoſt wholly covered with large trees.

At noon, we were in 42° 51′ S. lat., and 142° 49′ E. long. The land to the north-eaſt, could only be ſeen through a thick fog, which obſcured the whole horizon.

20th. The variation of the compaſs had very rapidly increaſed ſince it became eaſterly; for it was now obſerved to be 7° eaſt.

The

The coaſt preſented no bight, in which we could hope to find good anchorage. At noon, we had arrived in latitude 43° 22′ S., and longitude 143° 28′ E., being but 5,100 toiſes diſtant from the land, which, from N. 7° W. to E. 23° S. always preſented very high mountains to our view.

At ſix o'clock in the evening, we doubled the ſouthern cape, at the diſtance of 10,200 toiſes. It is remarkable, that in the different windings of the coaſt, which we followed, we had always the wind a-ſtern. It appeared to me, that the high mountains, oppoſing a barrier to the wind, forced them to obſerve the direction of the coaſt.

All the other mountains were ſurpaſſed in altitude, by that which we ſaw covered with ſnow, when we anchored in Port Dentrecaſteaux, the preceding year. But as this was a much warmer ſeaſon, we obſerved ſnow only in great excavations, where it was ſcreened from the ſolar rays, for a conſiderable part of the day. That mountain is remarkable for a little conical peak, which forms its ſummit.

At the approach of night, we paſſed very near the Mew-ſtone, and ſoon after we brought to, before a very freſh breeze at weſt.

We ſounded ſeveral times with a line of eighty-three fathoms, without reaching the bottom.

As we were embayed upon the coaſt, by a wind at S. S. W. we were obliged to tack.

21ſt. At noon, we were in latitude 43° 44′ S. and longitude 144° 16 W., when the Mew-ſtone bore W. 16° 30′ S., the Eddy-ſtone S. S. E. 1° E. and the neareſt land about N. N. W. at the diſtance of 1,540 toiſes.

22d. Very early this morning, we were at the entrance of the Bay of Tempeſts. The wind blowing from the E. S. E. hindered us from entering Dentrecaſteaux's Strait, where we intended to anchor in a bay which we had explored the preceding year, and which was extremely commodious for giving our ſhips all the neceſſary repairs. But we were obliged to enter the Bay of Rocks, a name, which ſome rocks almoſt level with the water, ſituated near its middle, had induced us to give that bay, which is the firſt on the larboard, on entering the Bay of Tempeſts, and lies in the direction of north-eaſt and ſouth-weſt. The Eſperance anchored there in very good time.

Having proceeded up this bay, about one-third part of its length, we found but ſixteen feet of water; and conſequently it would not have been prudent for us to go farther, without ſounding all the way, which was the eaſier to be done, as we had ſeveral boats afloat. Cretin, who had taken ſoundings in this road the preceding year, told our Commander that he would not find leſs water in it than ſixteen feet; and this prevented all farther ſearch. That aſſertion, however, ought not to have been entirely adopted; for, beſides that Cretin had not ſounded the bay ſo deliberately as to be able to inform us reſpecting its depth within a foot or two, he was in doubt whether or not he had performed that operation at low water, a circumſtance which would produce a difference of at leaſt ſix feet, and conſequently would not have left ſufficient water for our ſhip. Notwithſtanding theſe conſiderations, we did not heſitate to ſteer to the larboard, and to approach ſtill nearer to the low ſhore. The conſequence was, that we ran a-ground, but fortunately upon a ſandy bottom. This accident happened at half an hour paſt nine o'clock. The wind blowing in heavy ſqualls, from the high mountains, drove the ſhip violently towards the ſhore, and fixed her deeper and deeper into the ſand.

The Eſperance immediately ſent her long-boat and her pinnace, which, in conjunction with our own boats, made vain efforts, on the ſtarboard ſide of our ſhip, to tow her off. It then became neceſſary to carry out an anchor to the W. N. W.

and to fix the ſhip by a hawſer, to prevent her from being carried nearer the land. Next, in order to lighten her, the ſalt-water, with which moſt of our caſks were filled, was emptied into the hold, and all the pumps ſet a-going to pump it out. As ſoon as we had diſcharged this ballaſt, we ſet the capſtan to work upon a large anchor, which had been put down cloſe to the firſt; but, with our utmoſt efforts, it was near one P. M. before we could diſengage the ſhip from the ſand-bank, and get her fairly afloat.

END OF THE FIRST VOLUME.

T. Gillet, Printer, Saliſbury-Square.

Ulloa's voyage to So America -
vol 1 - page 176 - go on to 178 -
Port of Punta - On this coa
is found that exquisite purple -
so much esteemed by the ancients
a shell fish growing on the rocks,
something larger than a nut &c.
The Limpet, described by
Collison in his history of Somerset-
shire said to be found at Porlock;
'tho equally plenty on the coasts in
the parish of old Cleeve, St Decuman
and so on to the Eastward.
From the above acct, & Ulloa's,
the two methods may be compared
so as to produce, perhaps, the pro-
per methods of obtaining the dye.

page 194 - see a curious acct of
alligators, continued to the end of the chapt
Bottom of page 127 read of the horrible
fish the Taburones & Tintoreras; and
the mantas or quilts who wrap their
fins round a man & instantly squeez
him to death; when diving for pear
page 207 hazard of travelling; & grea
judgment of the mules on which the
riders life depends. some may say sagacit

page 339 description of Quinquina or Jesuites Bark, in so much esteem for intermitting fevers, ague &c &c

— 341 very curious & particular account of breeding & curing the cochineal insect, which goes on to page 347. — monuments of ancient Indians p: 479.

Up the river Amazon (page 411) to the westward, in Latitude 10 or 2, south of the Equator; curious & strange customs of different nations of Indians; many of which prove to me that they are the same people originally with the inhabitants of Pr: Williams Sound; ~~[illegible]~~, Queen Charlott's sound + Isles; ~~and Sound~~ Nootka or King George's Sound Indians; & the long eared Indians as described by Capt. Cook [illegible] to be seen in ~~the~~ the prints belonging to his voyage in ~~the~~ some of the South Sea Islands.

These people must have come originally from the North East parts of Asia.

The Mexicans & Peruvians are certainly different people, & were found to have been much more refined; spun & wove [illegible] & tilled the earth. 418 read —

p: 464 Hunting; for G- J- &c: 469 Gold mines &

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